

Service Manual

MS2000

MS2000R

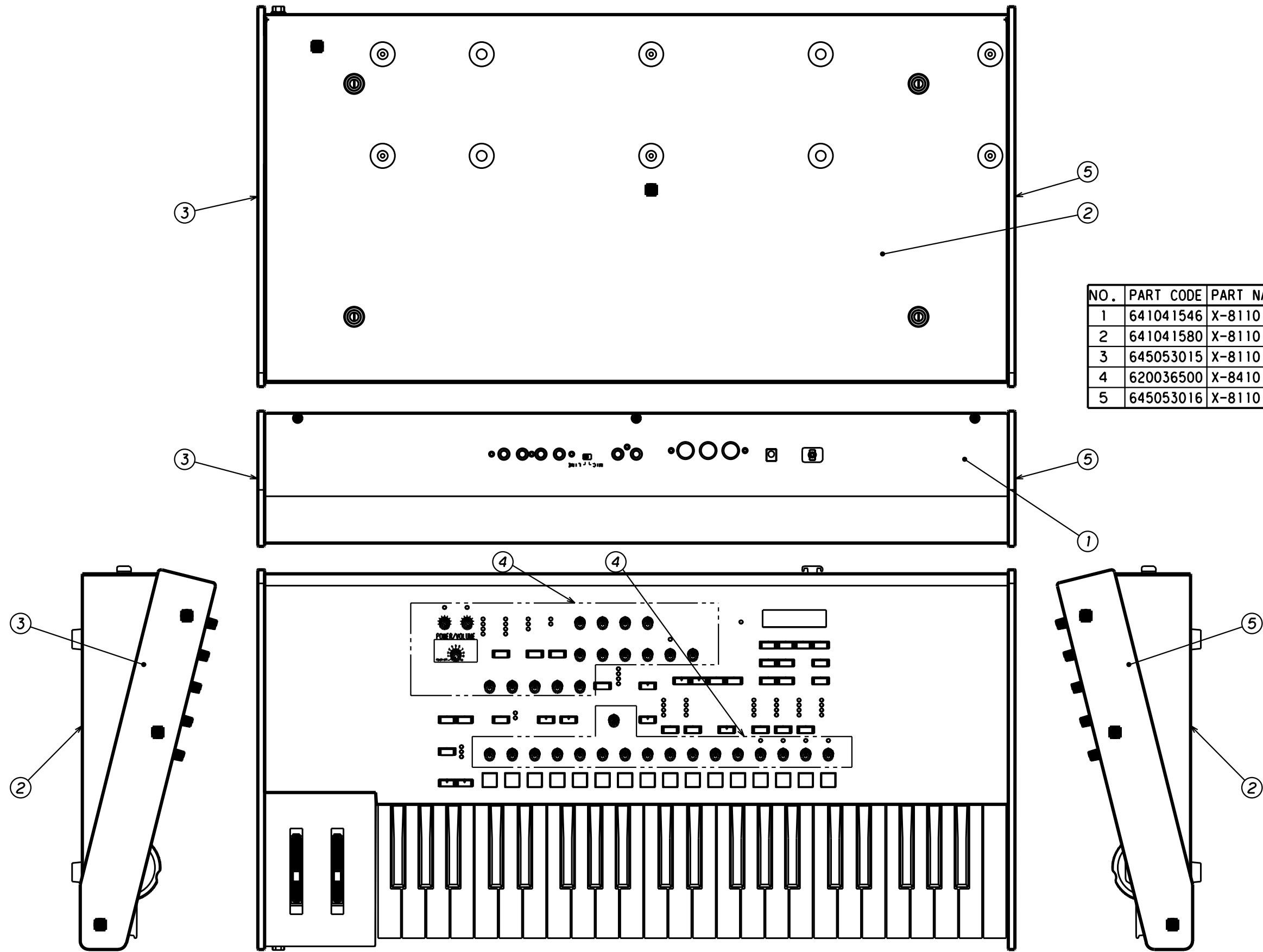
CONTENTS

1) Structural Diagram - - - - -	2
2) Block Diagram - - - - -	13
3) Circuit Diagram - - - - -	14
4) Diagnostics - - - - -	22
5) Parts List - - - - -	23

Revision: 1.00

Issued date: May.10.2000

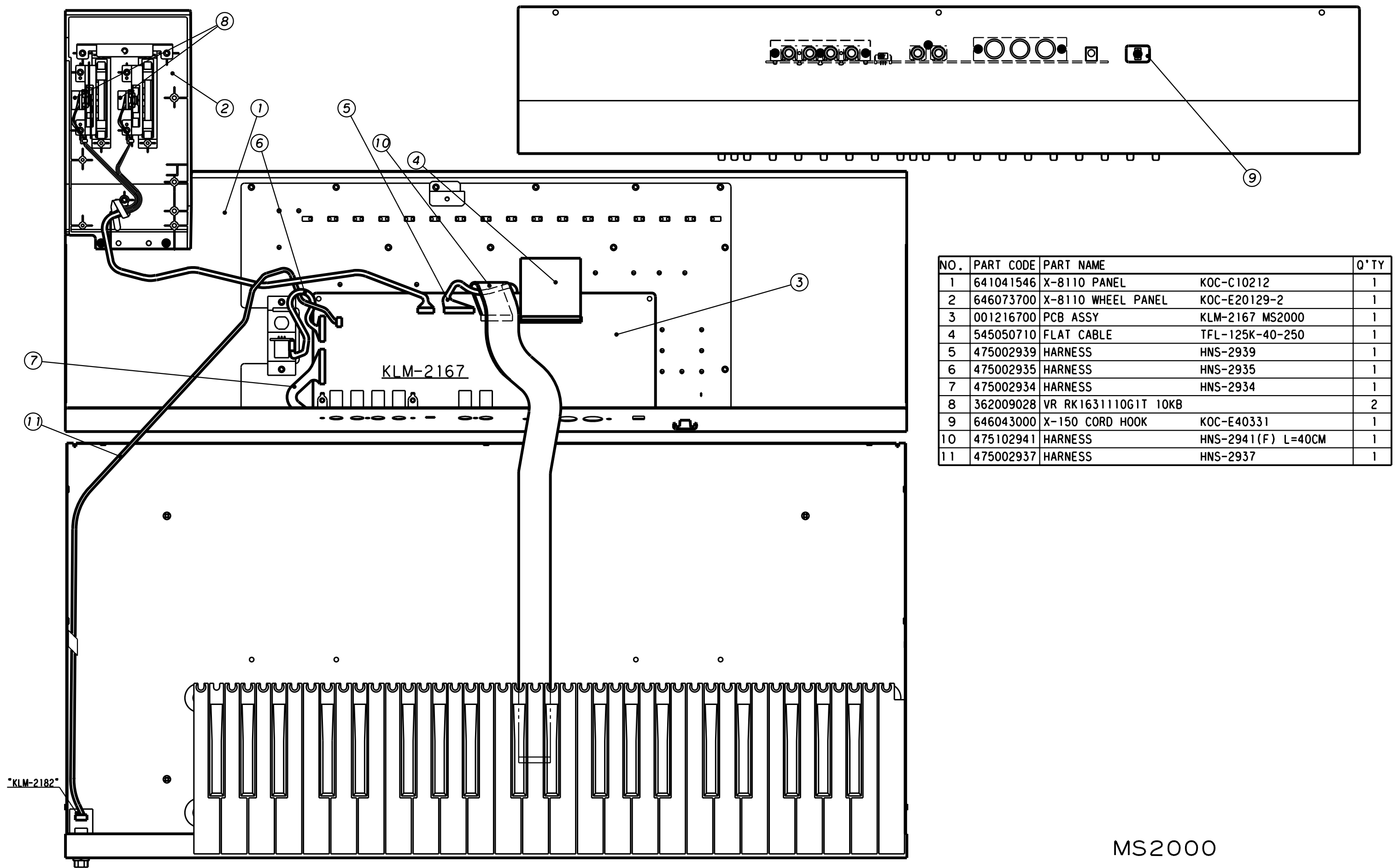
Issued by: KORG INC.



NO.	PART CODE	PART NAME	Q'TY
1	641041546	X-8110 PANEL KOC-C10212	1
2	641041580	X-8110 BOTTOM COVER KOC-C10213	1
3	645053015	X-8110 SIDE PLATE L KOC-D30193-1	1
4	620036500	X-8410 VR KNOB KOC-E40487	35
5	645053016	X-8110 SIDE PLATE R KOC-D30193-2	1

MARK	BT	B	BZMC	4 x10	8
MARK	BT	B	BZMC	3 x 8	3
MARK	SCREWS				Q'TY

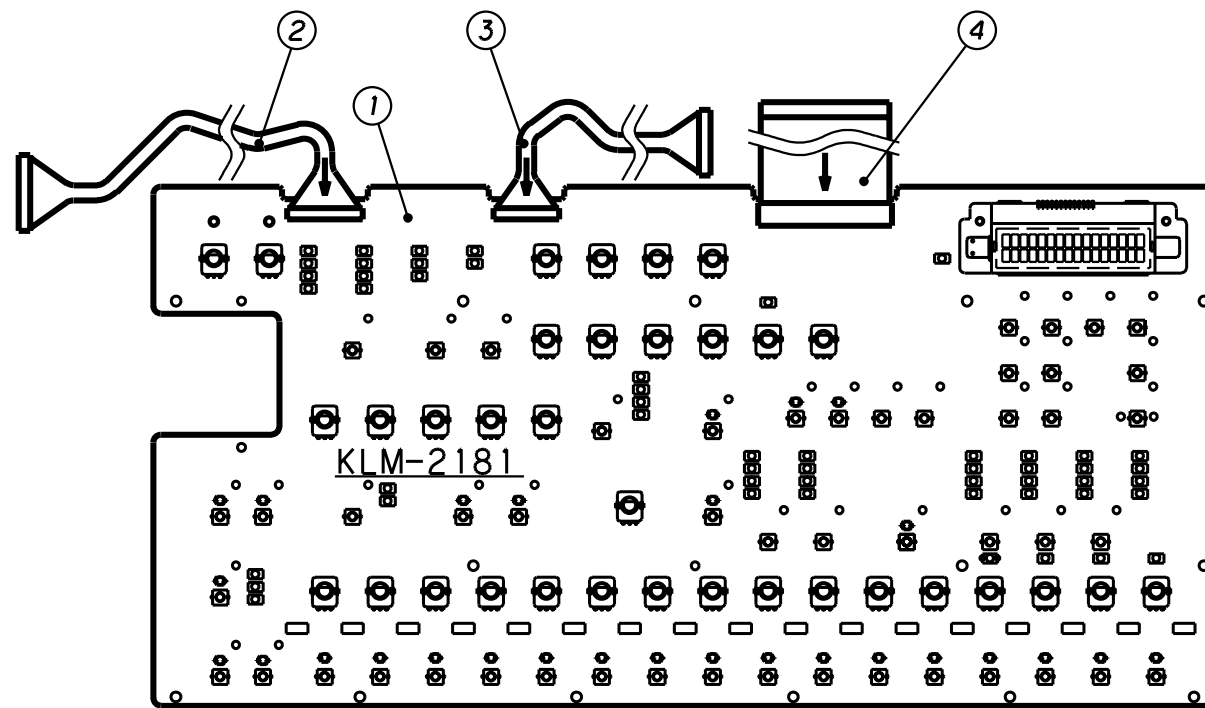
MS2000
DISASSEMBLY 1



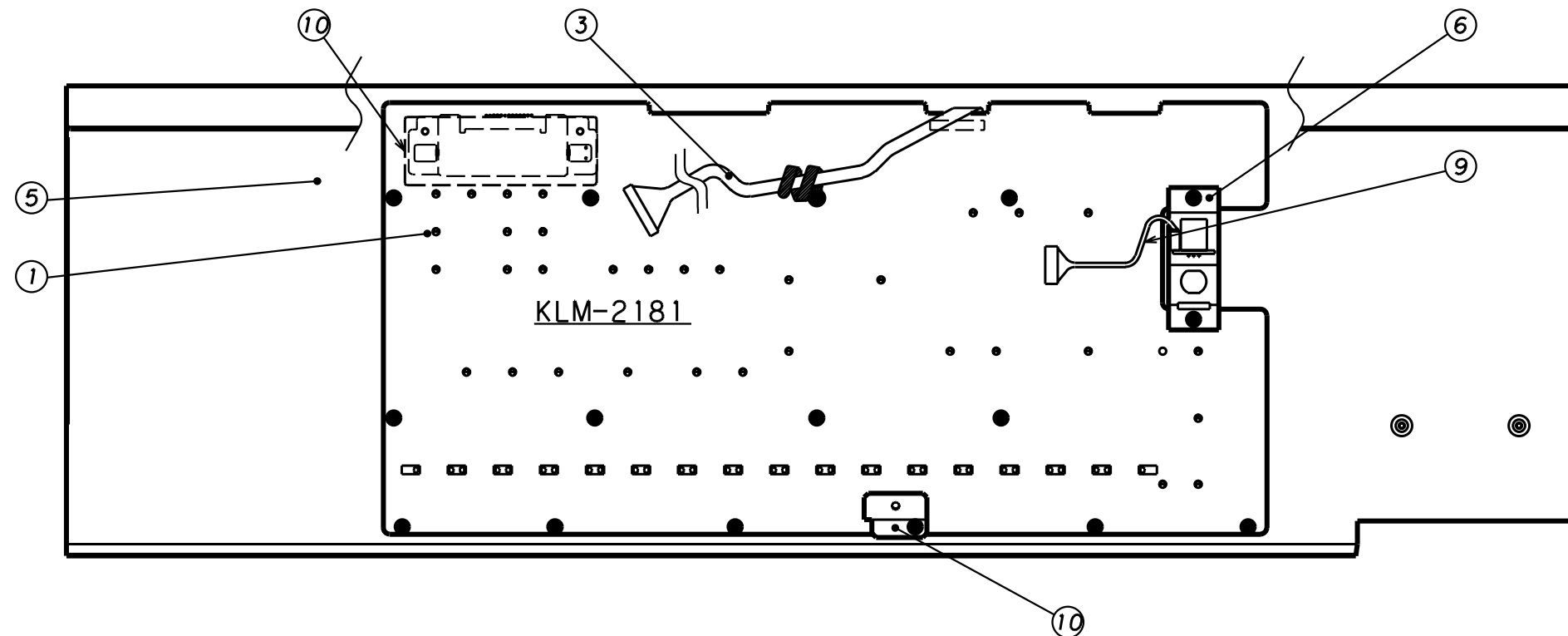
NO.	PART CODE	PART NAME		Q'TY
1	641041546	X-8110 PANEL	KOC-C10212	1
2	646073700	X-8110 WHEEL PANEL	KOC-E20129-2	1
3	001216700	PCB ASSY	KLM-2167 MS2000	1
4	545050710	FLAT CABLE	TFL-125K-40-250	1
5	475002939	HARNESS	HNS-2939	1
6	475002935	HARNESS	HNS-2935	1
7	475002934	HARNESS	HNS-2934	1
8	362009028	VR RK1631110G1T 10KB		2
9	646043000	X-150 CORD HOOK	KOC-E40331	1
10	475102941	HARNESS	HNS-2941(F) L=40CM	1
11	475002937	HARNESS	HNS-2937	1

MS2000
DISASSEMBLY 2

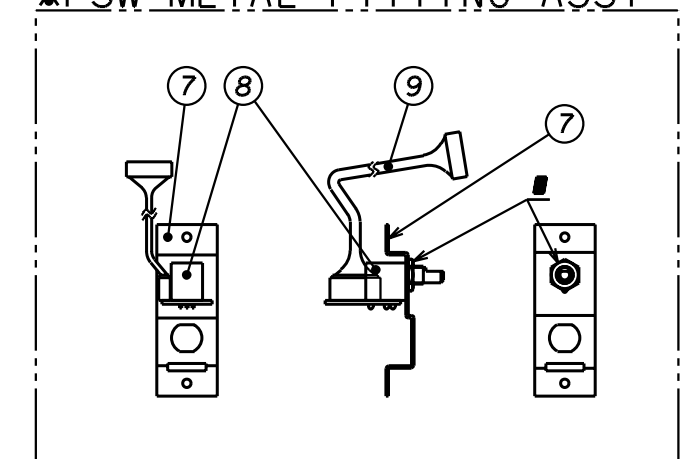
●	BT	B	BZMC 3 x 8
MARK			SCREWS
			9
			Q'TY



NO.	PART CODE	PART NAME	Q'TY
1	001218100	PCB ASSY KLM-2181/2/3 MS2000/R	1
2	475002934	HARNESS HNS-2934	1
3	475002939	HARNESS HNS-2939	1
4	545050710	FLAT CABLE TFL-125K-40-250	1
5	641041546	X-8110 PANEL KOC-C10212	1
6	-----	PSW METAL FITTING ASSY	
7	641041578	X-8110/8270 POWER SW ANGLE	1
8	362009027	VR RK0971221Z05 W/SW	1
9	475002935	HARNESS HNS-2935	1
10	641041583	X-8110 SUPPORT ANGLE KOC-C41181	1

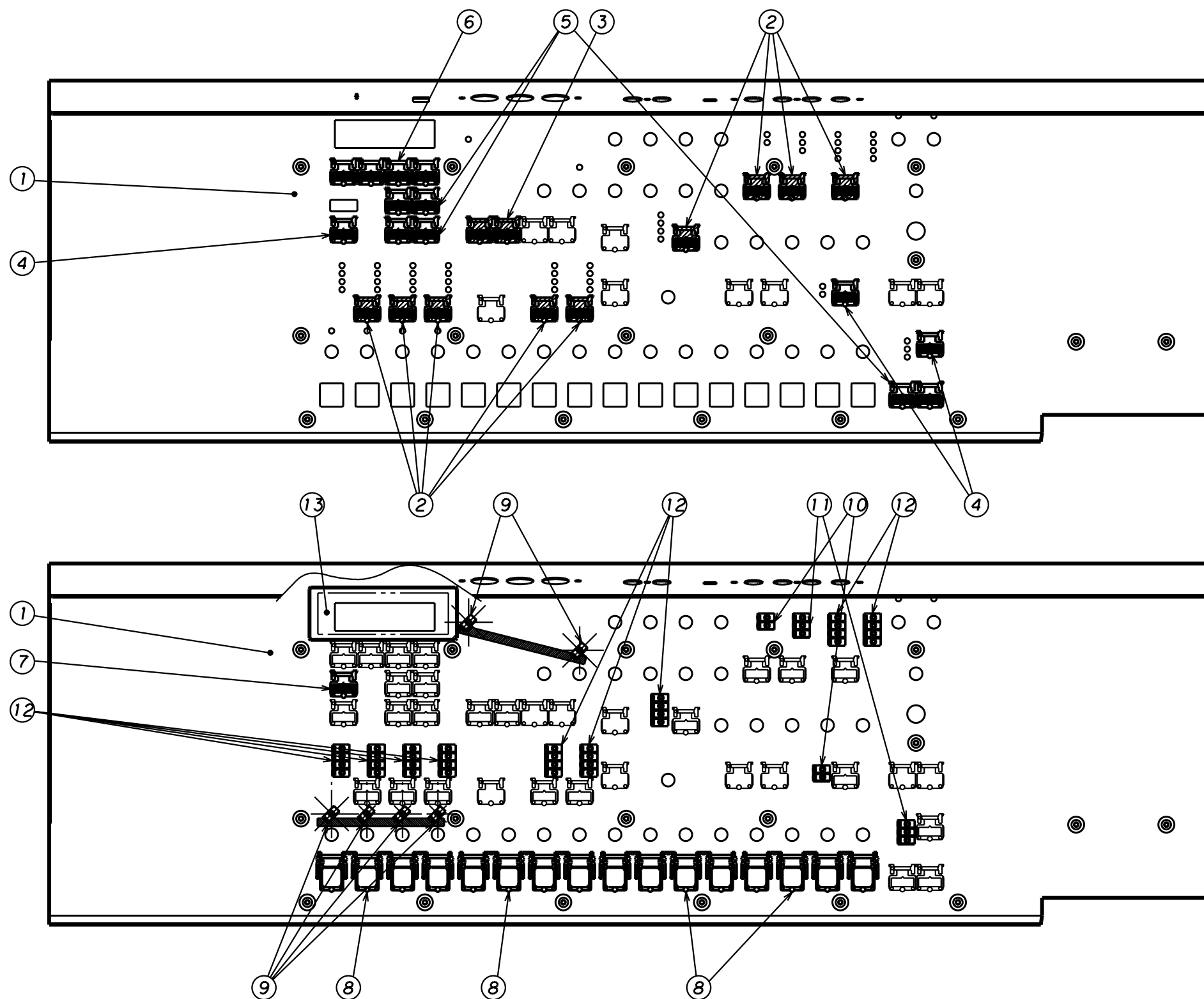


*PSW METAL FITTING ASSY



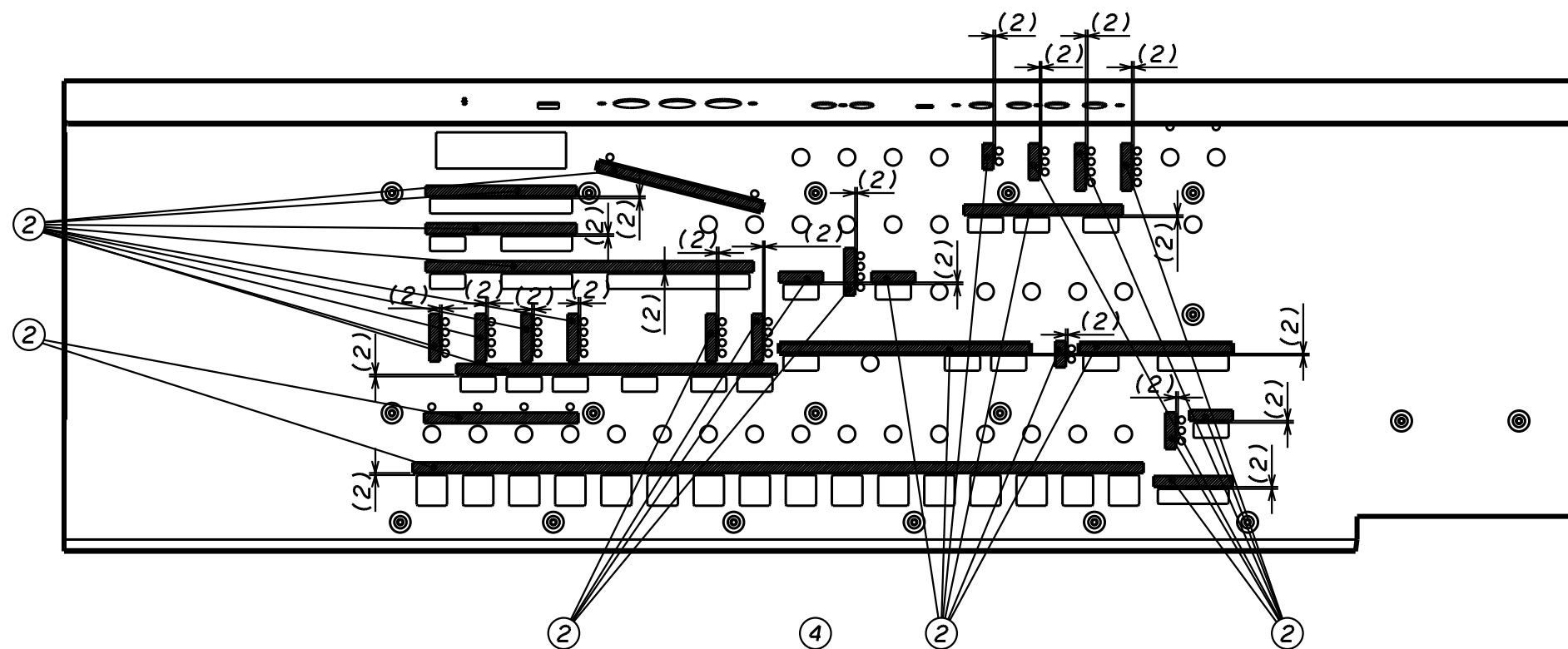
■	VN	BZMC 7	1
●	BT B	ZMC 3 x 6	16
MARK	SCREWS		Q'TY

MS2000
DISASSEMBLY 3

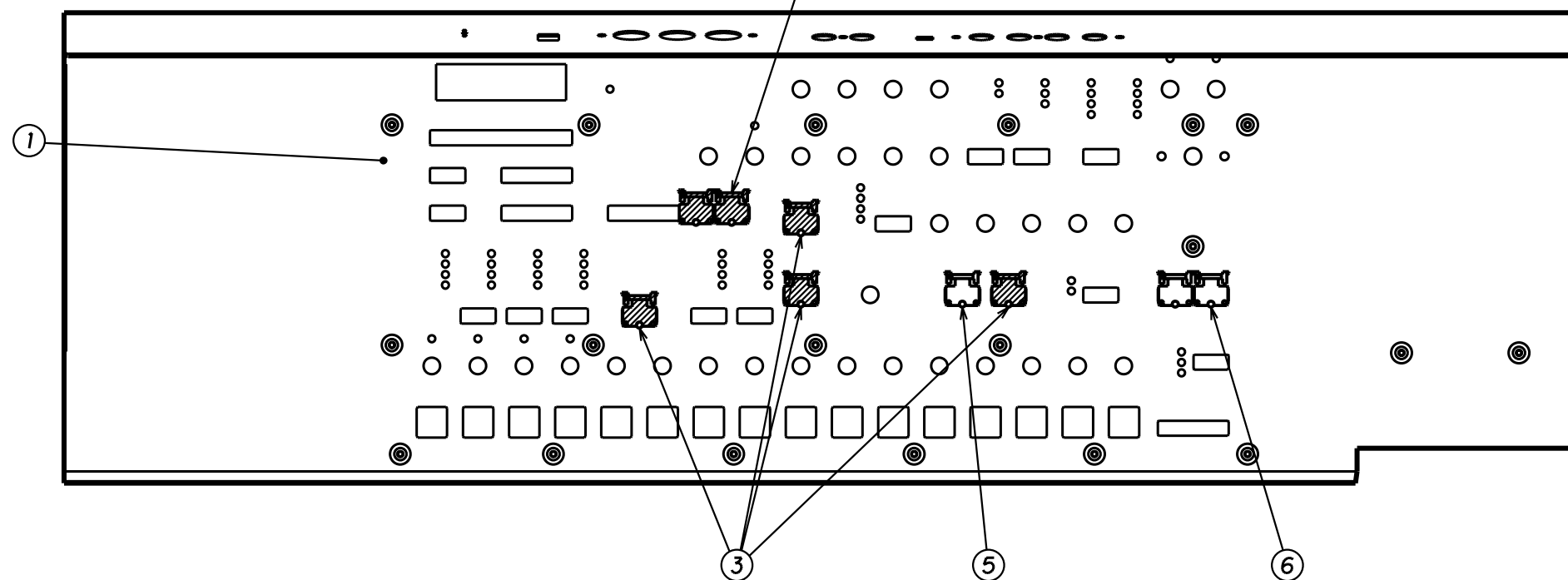


NO.	PART CODE	PART NAME		Q'TY
1	641041546	X-8110 PANEL	KOC-C10212	1
2	620032400	4-LINKAGE KNOB	B-1-BK	9
3	620032300	4-LINKAGE KNOB	B-2-BK	1
4	620035100	4-LINKAGE KNOB	B-1-LG	3
5	620037000	4-LINKAGE KNOB	B-2-LG	3
6	620036900	4-LINKAGE KNOB	B-4-LG	1
7	620037100	4-LINKAGE KNOB	B-1-RE	1
8	620037900	X-8110 KNOB L	KOC-H40148-4	4
9	620037600	X-8110 LED REFRACTOR	KOC-H40147-1	6
10	620037500	X-8110 LED REFRACTOR	KOC-H40147-2	2
11	620037400	X-8110 LED REFRACTOR	KOC-H40147-3	2
12	620037300	X-8110 LED REFRACTOR	KOC-H40147-4	9

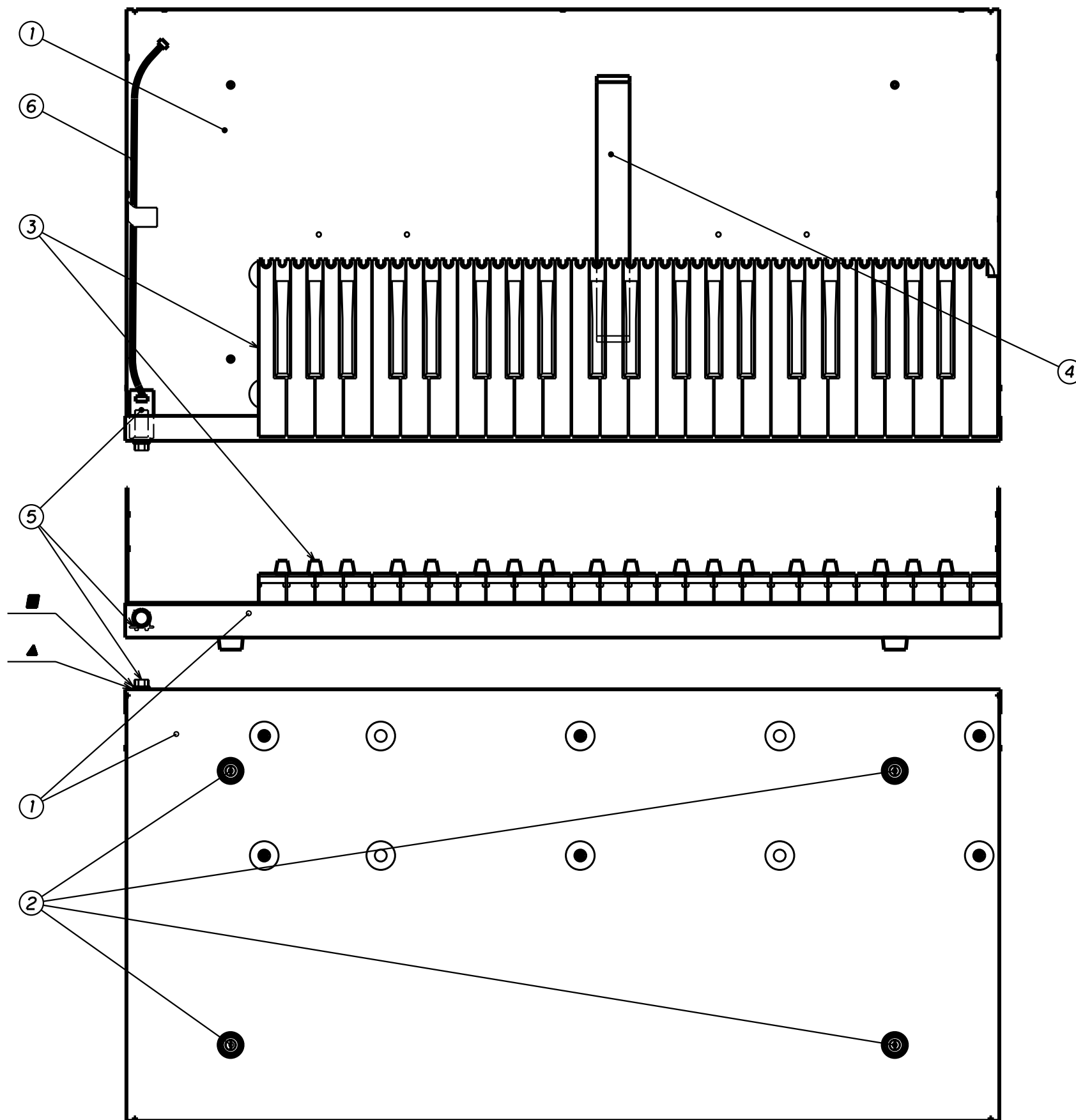
MS2000
DISASSEMBLY 4



NO.	PART CODE	PART NAME	Q'TY
1	641041546	X-8110 PANEL KOC-C10212	1
2	-----	DOUBLE SIDE TAPE	27
3	620032100	4-LINKAGE KNOB A-1-BK	4
4	620032000	4-LINKAGE KNOB A-2-BK	1
5	620035200	4-LINKAGE KNOB A-1-LG	1
6	620035300	4-LINKAGE KNOB A-2-LG	1



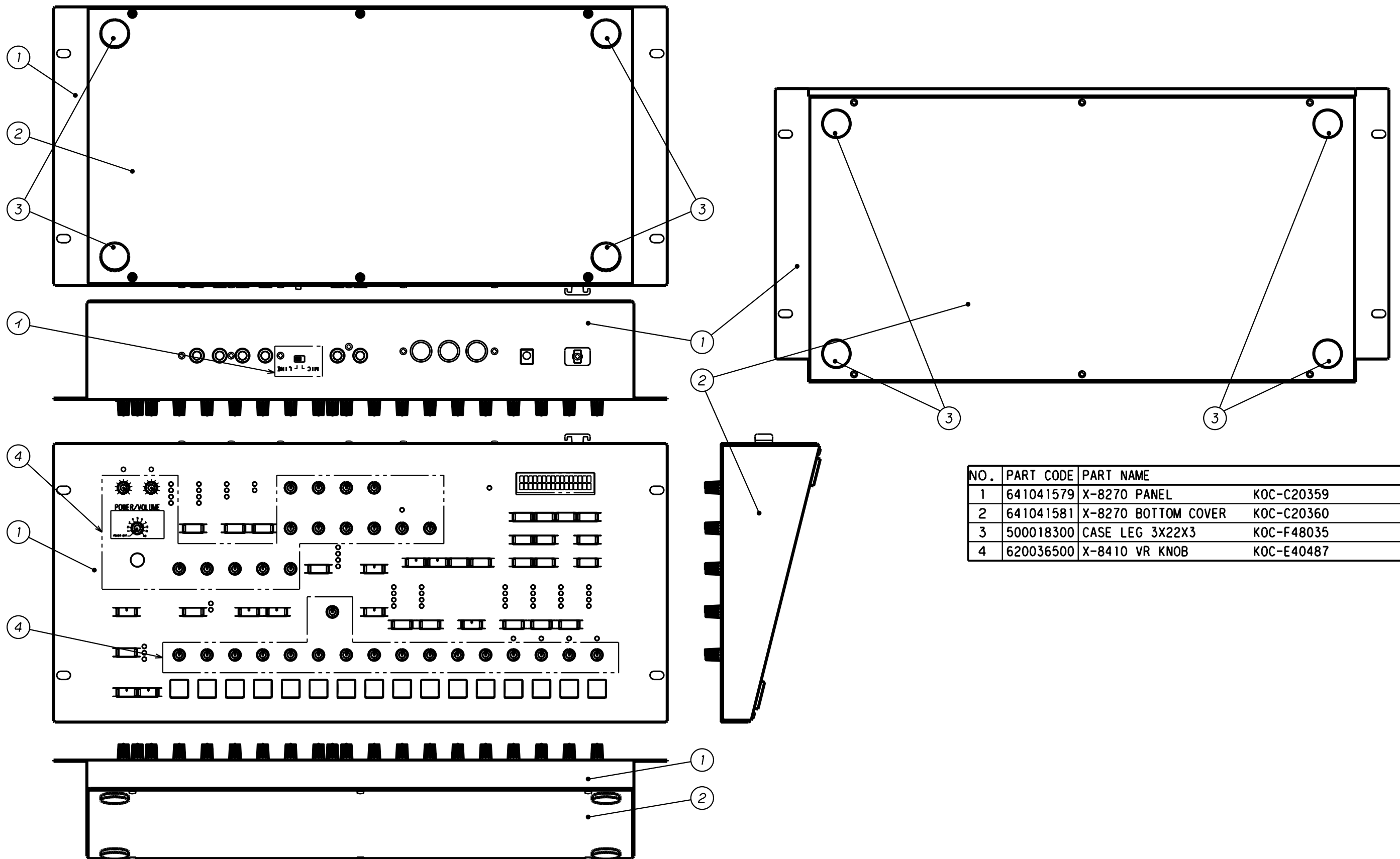
MS2000
DISASSEMBLY 5



NO.	PART CODE	PART NAME	Q'TY
1	641041580	X-8110 BOTTOM COVER KOC-C10213	1
2	500022500	CASE LEG FF-004	4
3	420006500	KEYBOARD 44TP/7BA+PCB	1
4	475102941	HARNESS HNS-2941(F) L=40CM	1
5	454012705	PHONE JACK YKB21-5257	1
6	475002937	HARNESS HNS-2937	1

▲	VW	BZMC 12	1
■	VN	BZMC 12	1
●	TP1 B	BZMC 3 x14	6
MARK	SCREWS		Q'TY

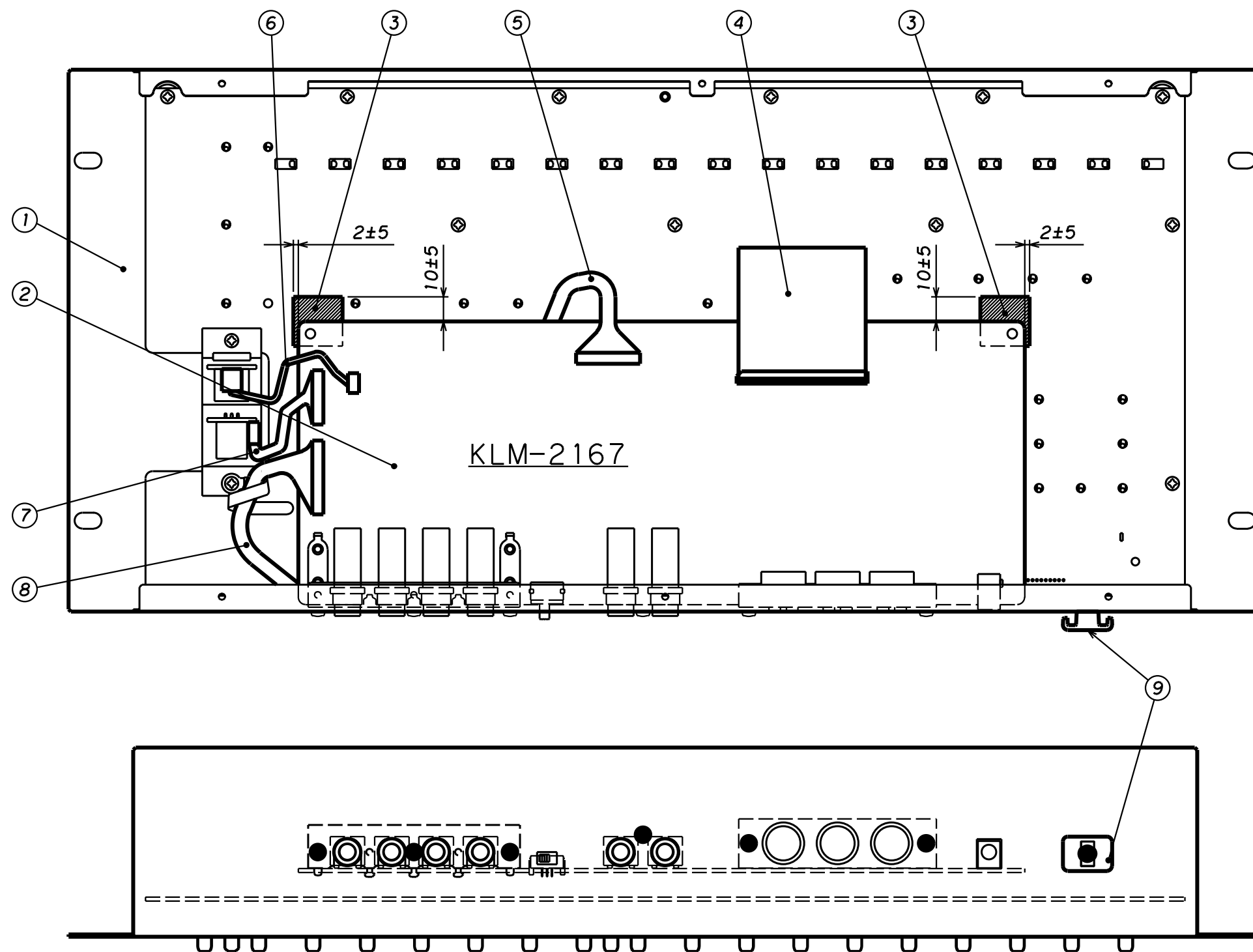
MS2000
DISASSEMBLY 6



NO.	PART CODE	PART NAME	Q'TY
1	641041579	X-8270 PANEL KOC-C20359	1
2	641041581	X-8270 BOTTOM COVER KOC-C20360	1
3	500018300	CASE LEG 3X22X3 KOC-F48035	4
4	620036500	X-8410 VR KNOB KOC-E40487	35

MS2000R
DISASSEMBLY 1

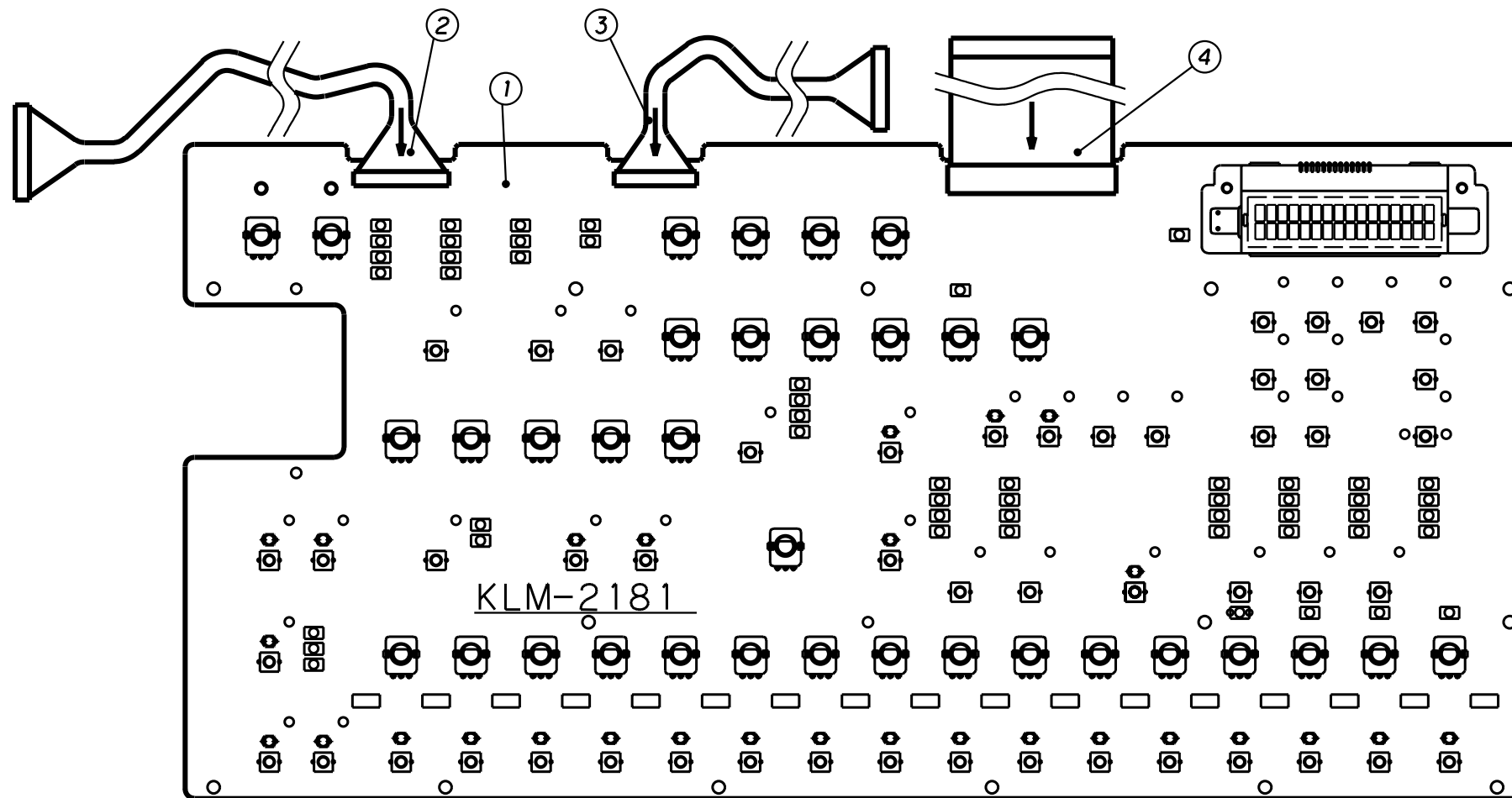
●	BT B BZMC 3 x 8	6
MARK	SCREWS	Q'TY



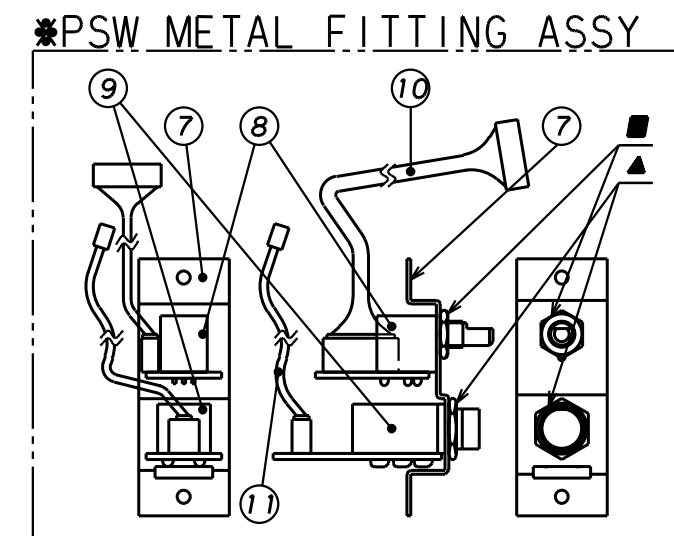
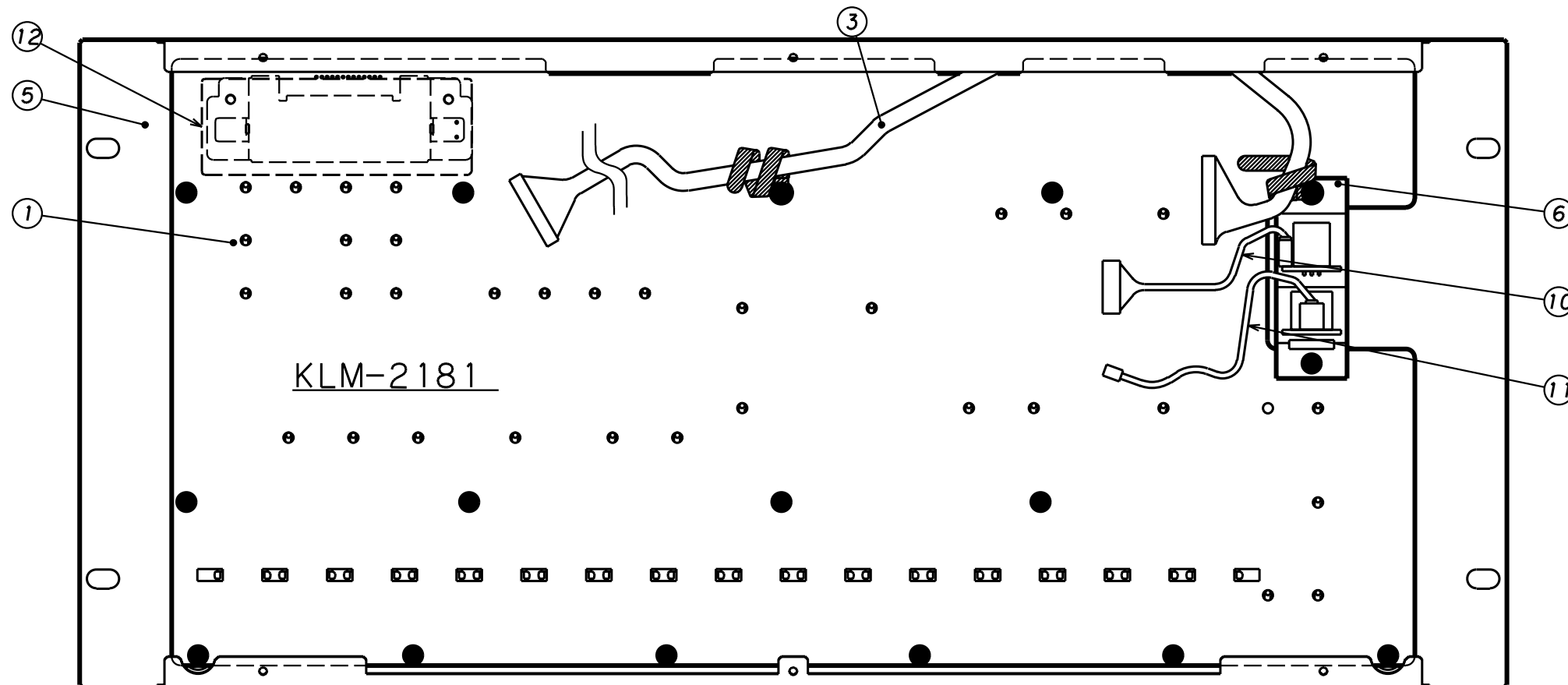
NO.	PART CODE	PART NAME	Q'TY
1	641041579	X-8270 PANEL KOC-C20359	1
2	001216701	PCB ASSY KLM-2167 MS2000R	1
3	500024000	X-410 SPONGE SPACER KOC-F40666	2
4	545050710	FLAT CABLE TFL-125K-40-250	1
5	475002939	HARNESS HNS-2939	1
6	475002938	HARNESS HNS-2938	1
7	475002936	HARNESS HNS-2936	1
8	475002934	HARNESS HNS-2934	1
9	646043000	X-150 CORD HOOK KOC-E40331	1

MS2000R
DISASSEMBLY 2

●	BT B BZMC 3 x 8	7
MARK	SCREWS	Q'TY

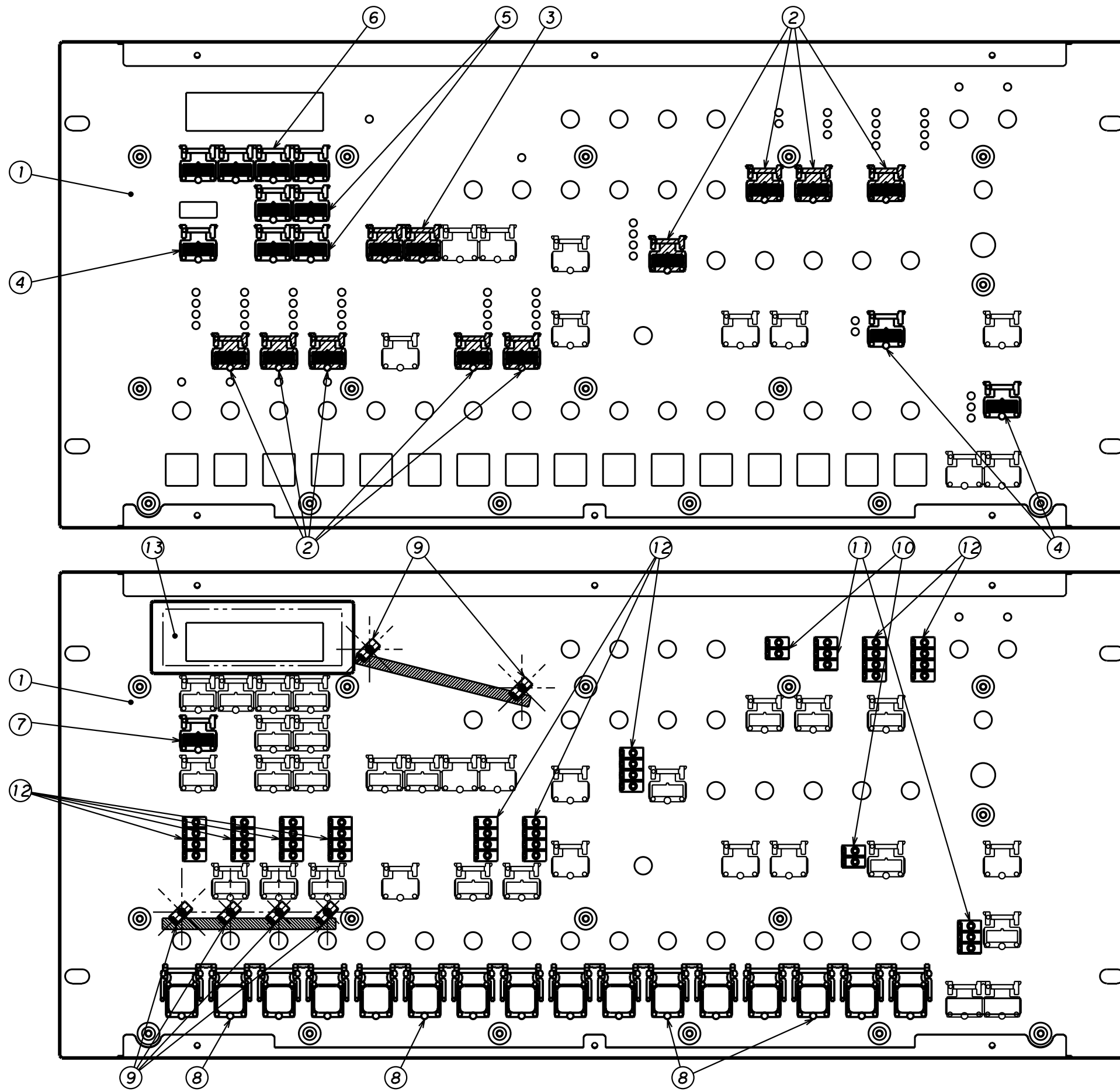


NO.	PART CODE	PART NAME	Q'TY
1	001218100	PCB ASSY KLM-2181/2/3 MS2000/R	1
2	475002934	HARNESS HNS-2934	1
3	475002939	HARNESS HNS-2939	1
4	545050710	FLAT CABLE TFL-125K-40-250	1
5	641041579	X-8270 PANEL KOC-C20359	1
6	-----	PSW METAL FITTING ASSY	
7	641041578	X-8110/8270 POWER SW ANGLE	1
8	362009027	VR RK0971221Z05 W/SW	1
9	454012705	PHONE JACK YKB21-5257	1
10	475002936	HARNESS HNS-2936	1
11	475002938	HARNESS HNS-2938	1
12	630025700	X-572 LCD WINDOW KOC-E40449	1



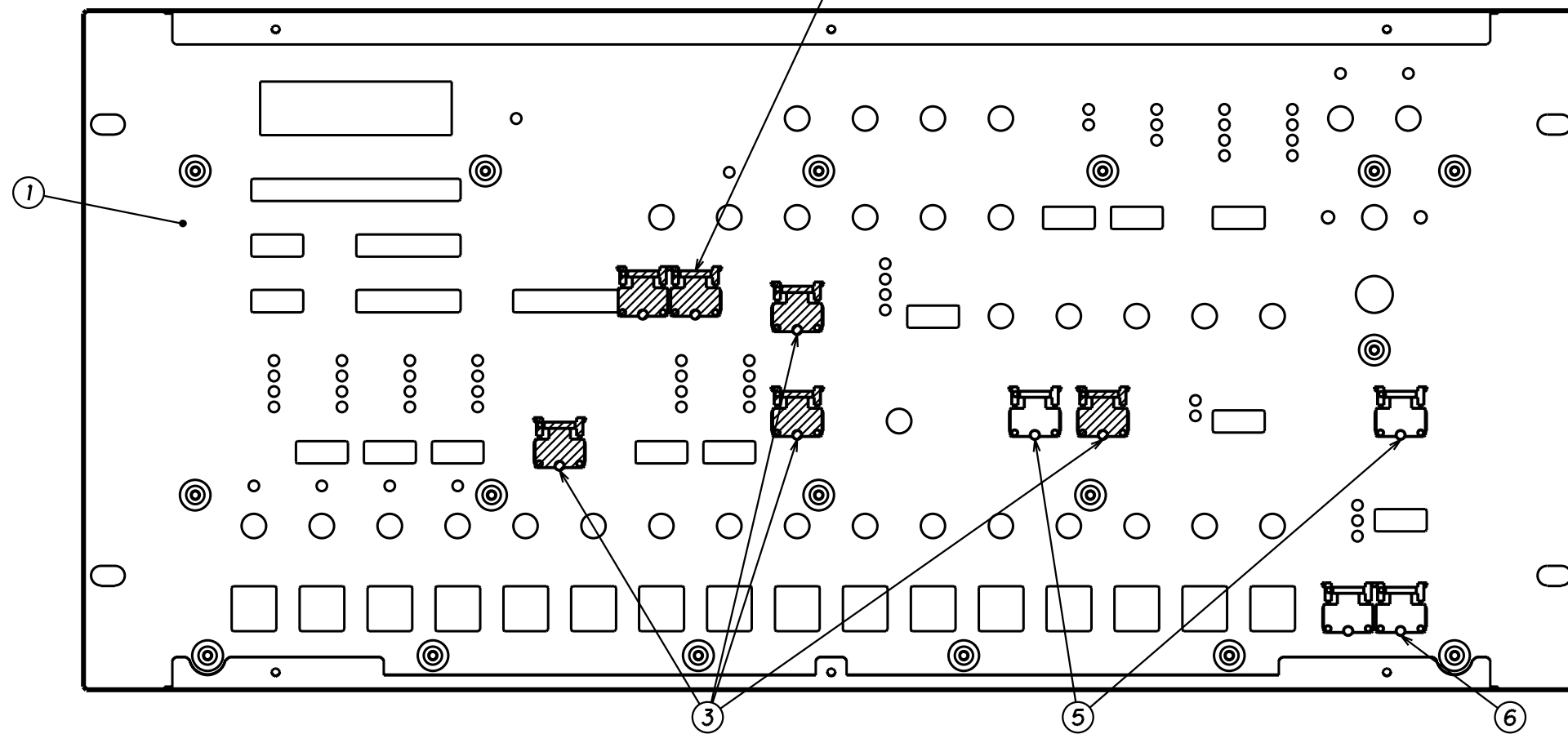
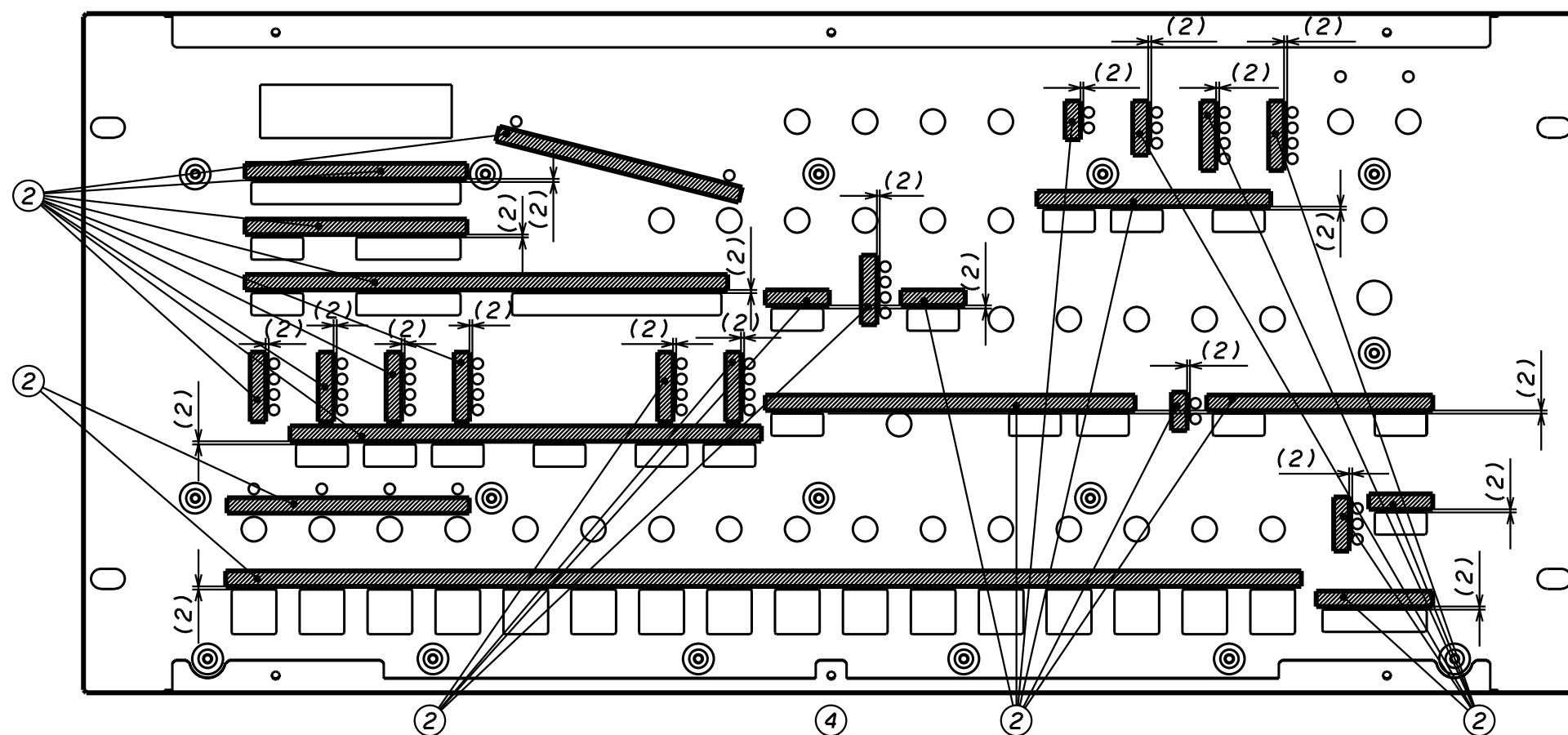
▲	VN	BZMC	12	1
■	VN	BZMC	7	1
●	BT	B	ZMC 3 x 6	16
MARK	SCREWS			Q'TY

MS2000R
DISASSEMBLY 3



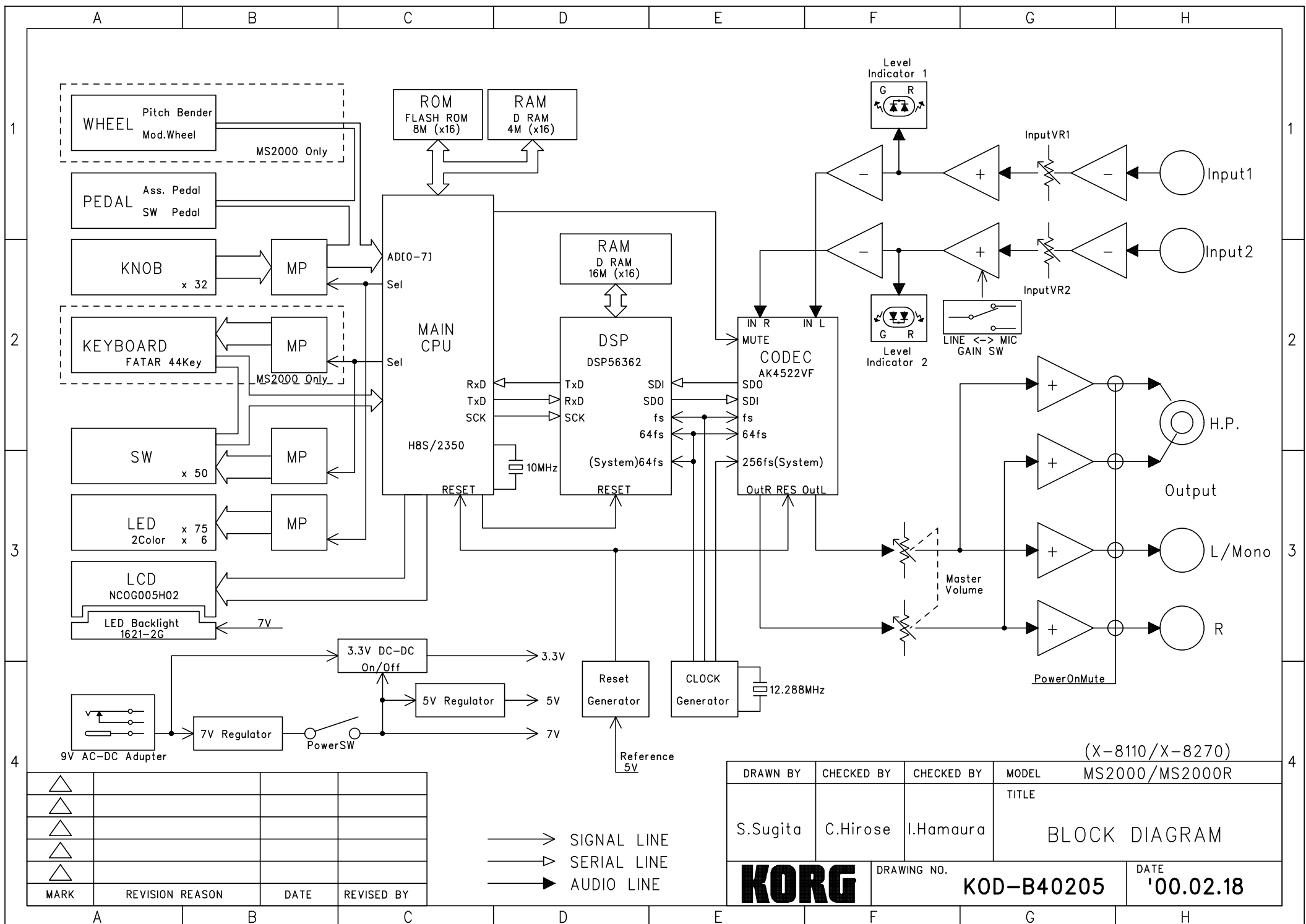
NO.	PART CODE	PART NAME		Q'TY
1	641041579	X-8270 PANEL	KOC-C20359	1
2	620032400	4-LINKAGE KNOB	B-1-BK	9
3	620032300	4-LINKAGE KNOB	B-2-BK	1
4	620035100	4-LINKAGE KNOB	B-1-LG	3
5	620037000	4-LINKAGE KNOB	B-2-LG	2
6	620036900	4-LINKAGE KNOB	B-4-LG	1
7	620037100	4-LINKAGE KNOB	B-1-RE	1
8	620037900	X-8110 KNOB L	KOC-H40148-4	4
9	620037600	X-8110 LED REFRACTOR	KOC-H40147-1	6
10	620037500	X-8110 LED REFRACTOR	KOC-H40147-2	2
11	620037400	X-8110 LED REFRACTOR	KOC-H40147-3	2
12	620037300	X-8110 LED REFRACTOR	KOC-H40147-4	9

MS2000R
DISASSEMBLY 4

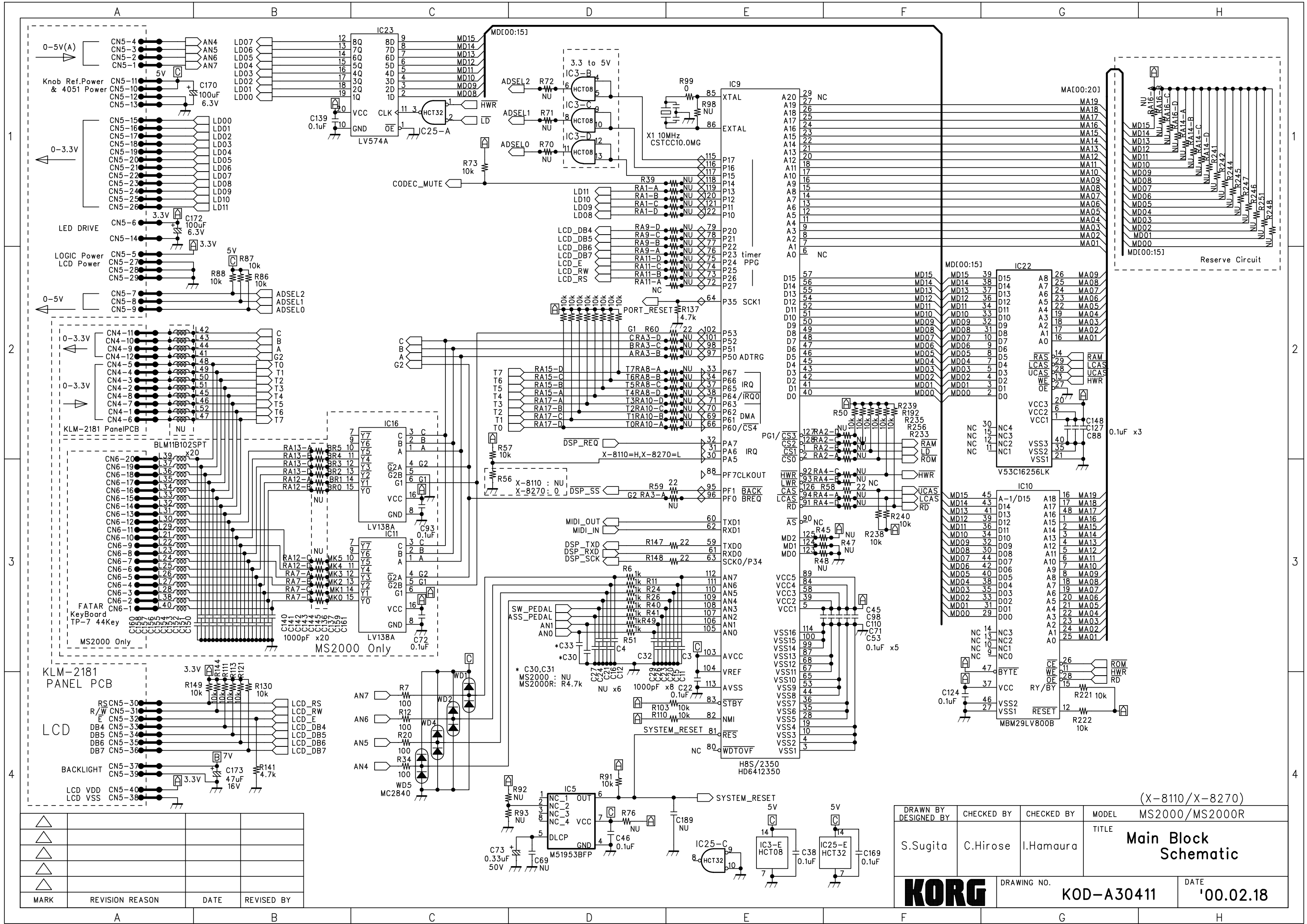


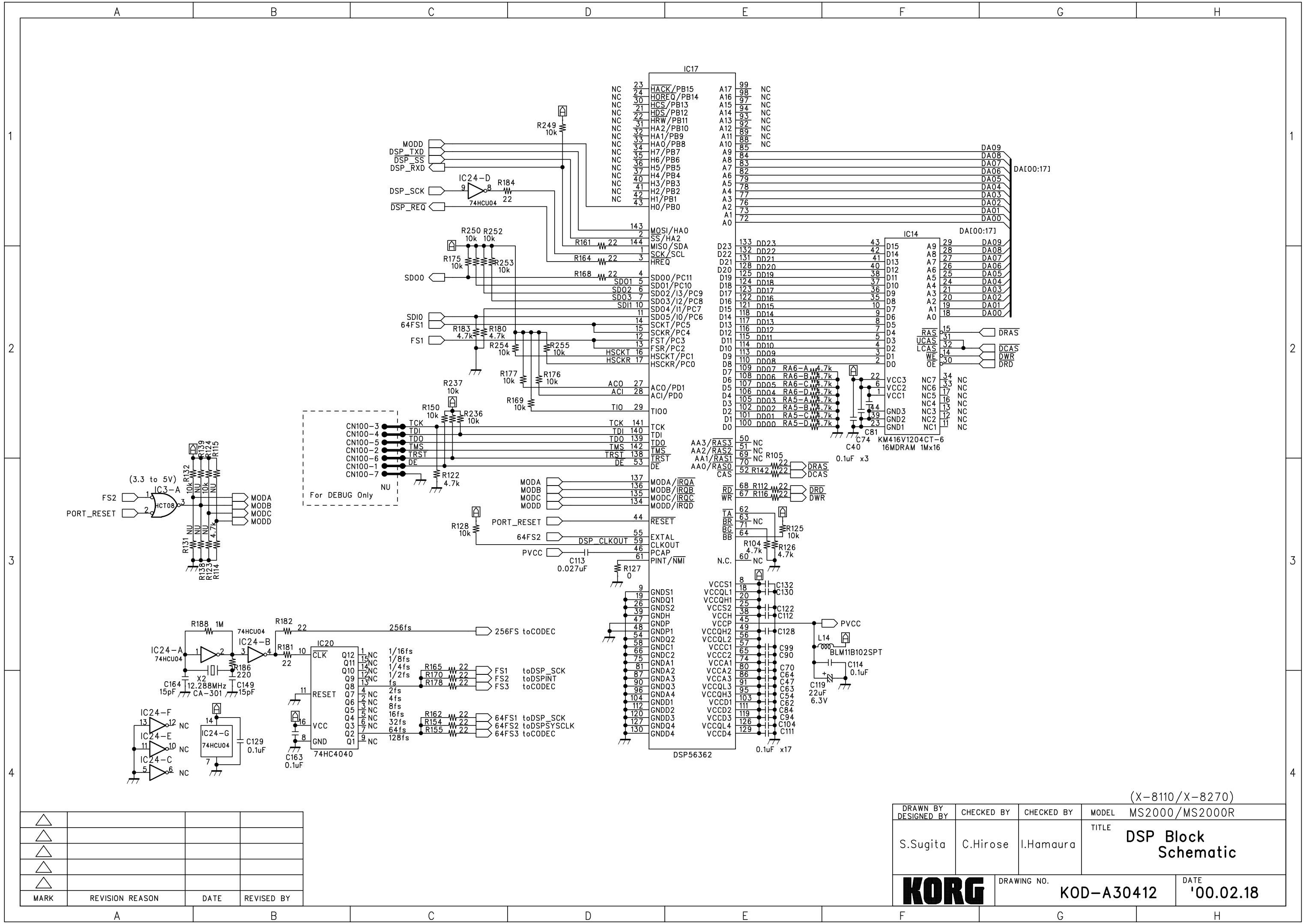
NO.	PART CODE	PART NAME	Q'TY
1	641041579	X-8270 PANEL KOC-C20359	1
2	-----	DOUBLE SIDE TAPE	27
3	620032100	4-LINKAGE KNOB A-1-BK	4
4	620032000	4-LINKAGE KNOB A-2-BK	1
5	620035200	4-LINKAGE KNOB A-1-LG	2
6	620035300	4-LINKAGE KNOB A-2-LG	1

MS2000R
DISASSEMBLY 5



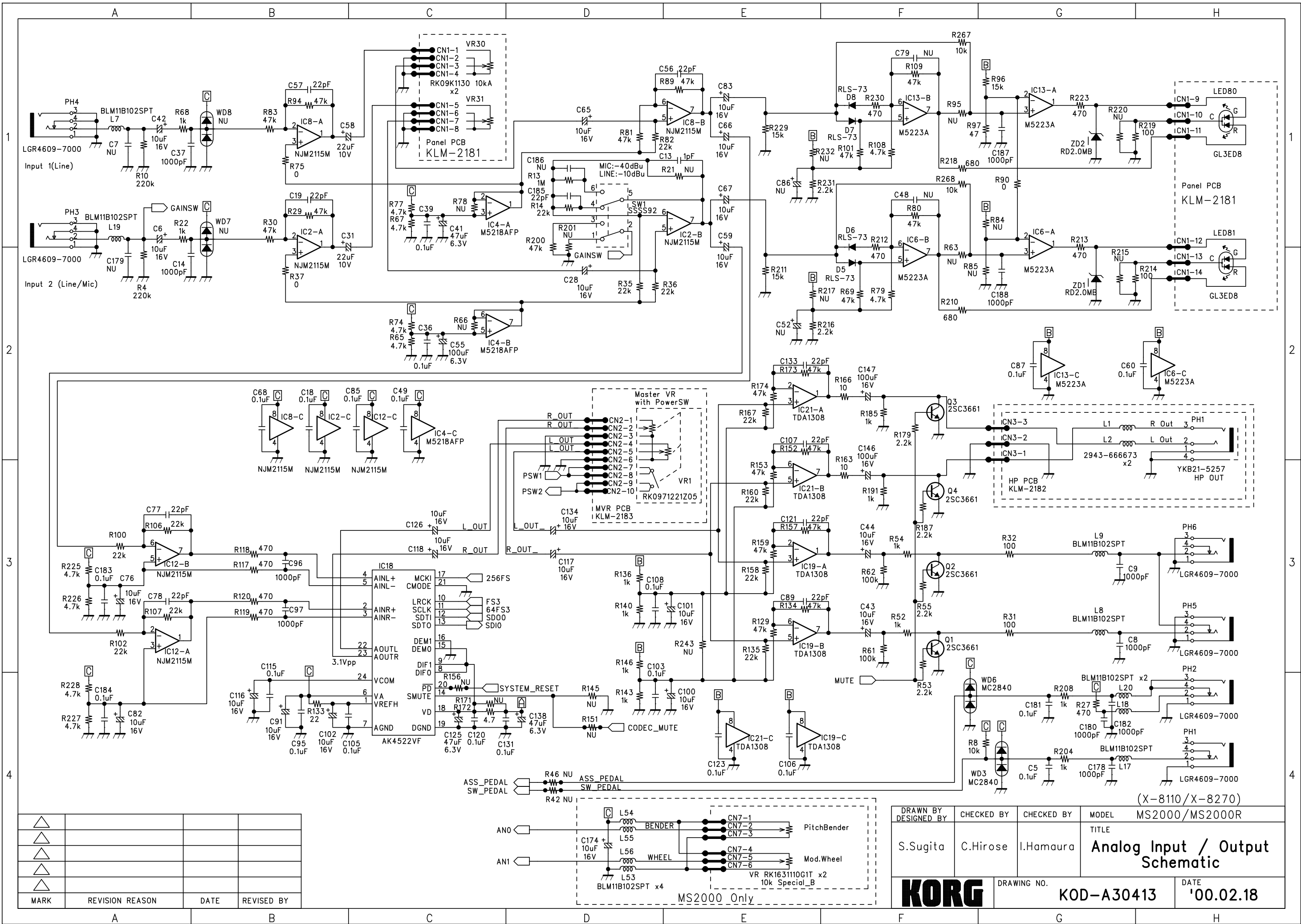
DRAWN BY		CHECKED BY	CHECKED BY	MODEL	(X-8110/X-8270) MS2000/MS2000R
S.Sugita		C.Hirose	I.Hamaura	TITLE	BLOCK DIAGRAM
DRAWING NO.			DATE		
KORG			KOD-B40205		'00.02.18





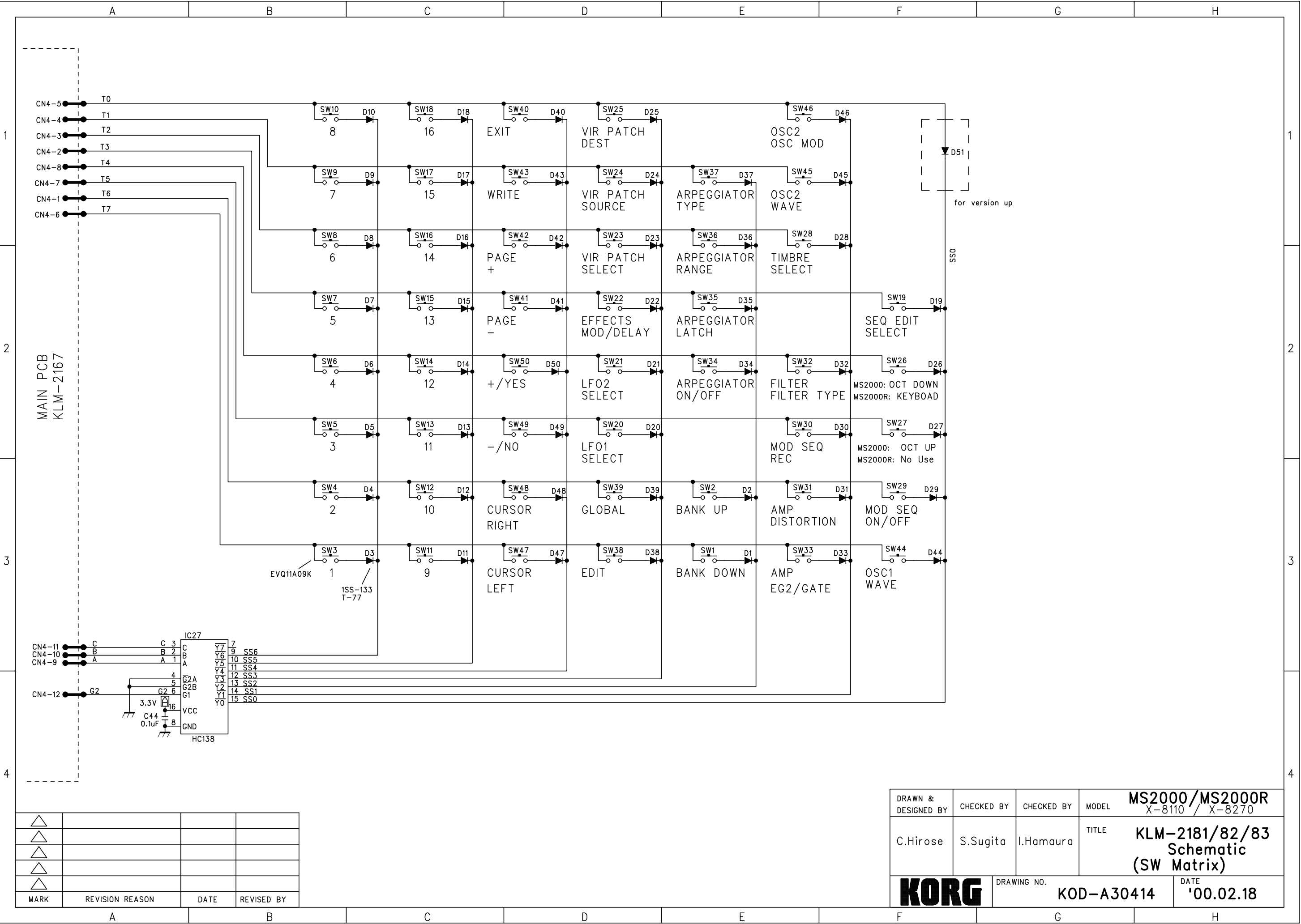
△			
△			
△			
△			
△			
MARK	REVISION REASON	DATE	REVISED BY

(X-8110/X-8270)			
DRAWN BY DESIGNED BY	CHECKED BY	CHECKED BY	MODEL MS2000/MS2000R
S.Sugita	C.Hirose	I.Hamaura	TITLE DSP Block Schematic
KORG		DRAWING NO. KOD-A30412	DATE '00.02.18

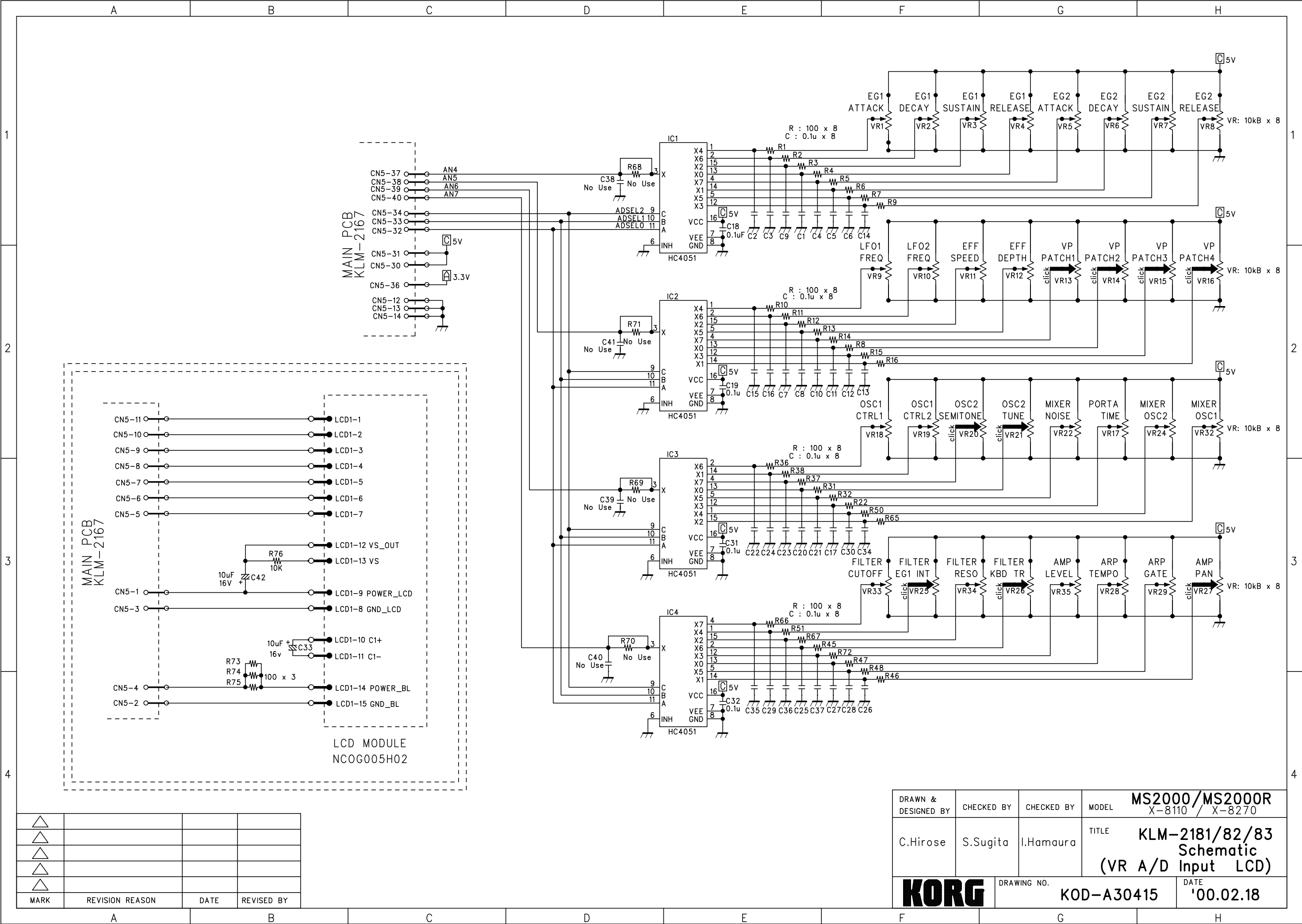


△			
△			
△			
△			
△			
MARK	REVISION REASON	DATE	REVISED BY

DRAWN BY DESIGNED BY	CHECKED BY	CHECKED BY	MODEL MS2000/MS2000R
S.Sugita	C.Hirose	I.Hamaura	TITLE Analog Input / Output Schematic
DRAWING NO. KOD-A30413			DATE '00.02.18

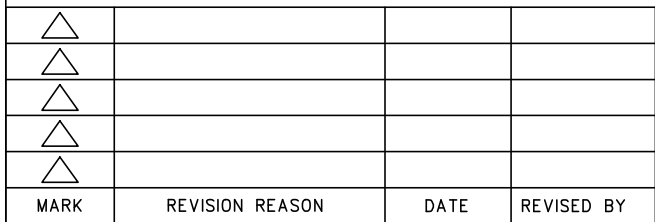


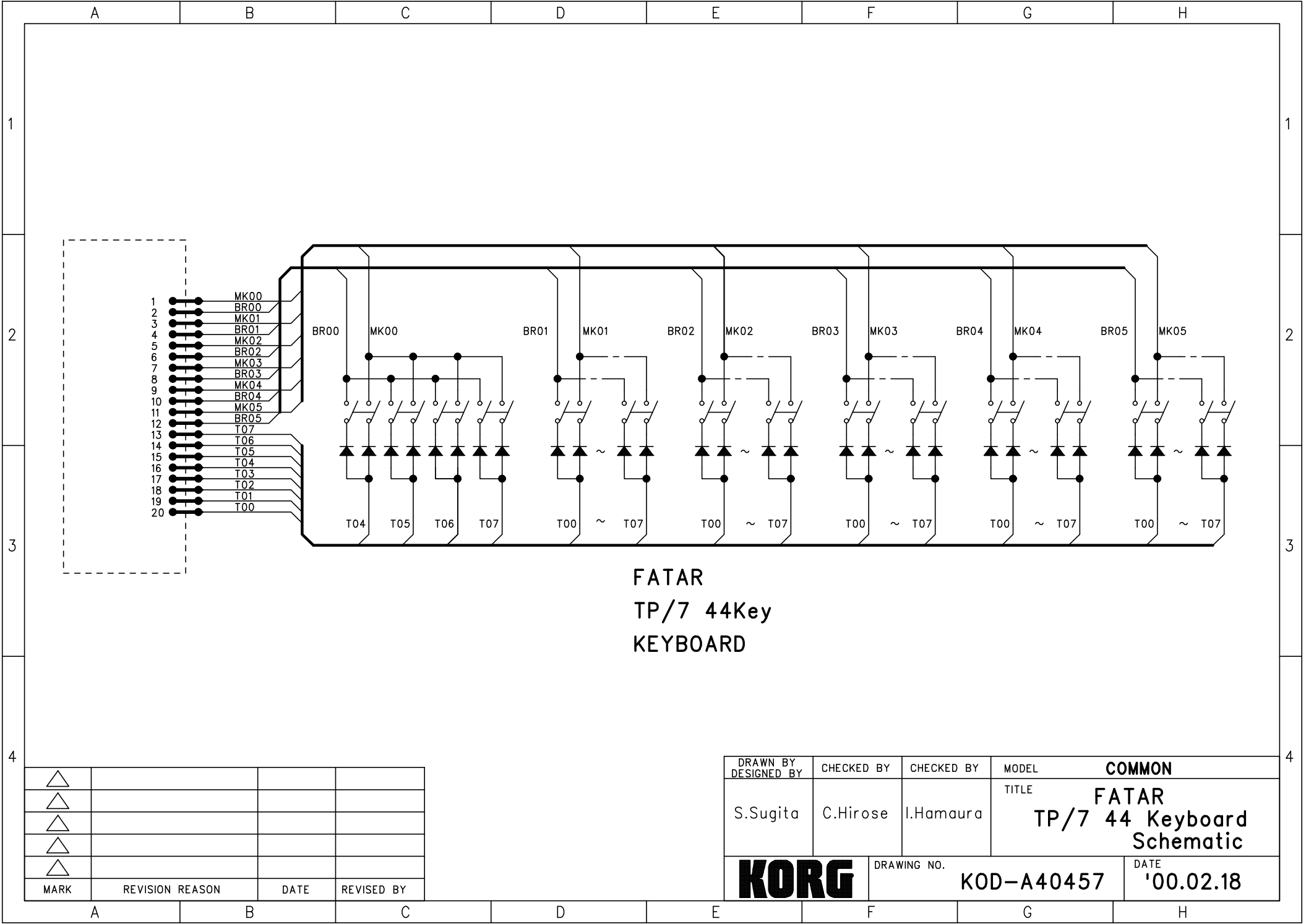
DRAWN & DESIGNED BY	CHECKED BY	CHECKED BY	MODEL
C.Hirose	S.Sugita	I.Hamaura	MS2000/MS2000R X-8110 / X-8270
			TITLE
			KLM-2181/82/83 Schematic (SW Matrix)
DRAWING NO.		DATE	
KORG		KOD-A30414	
		'00.02.18	



△			
△			
△			
△			
△			
MARK	REVISION REASON	DATE	REVISED BY

DRAWN & DESIGNED BY	CHECKED BY	CHECKED BY	MODEL	MS2000/MS2000R X-8110 / X-8270
C.Hirose	S.Sugita	I.Hamaura	TITLE	KLM-2181/82/83 Schematic (VR A/D Input LCD)
KORG		DRAWING NO.	KOD-A30415	DATE '00.02.18





FATAR
TP/7 44Key
KEYBOARD

△			
△			
△			
△			
△			
MARK	REVISION REASON	DATE	REVISED BY

DRAWN BY DESIGNED BY	CHECKED BY	CHECKED BY	MODEL COMMON
S.Sugita	C.Hirose	I.Hamaura	TITLE FATAR TP/7 44 Keyboard Schematic
KORG		DRAWING NO. KOD-A40457	DATE '00.02.18

How to start/operate the test mode

[ON/OFF] + [1] + Power ON	: Full test (Automatic measure mode)
[ON/OFF] + [2] + Power ON	: Internal test is not executed (No Preload, Automatic measure mode)
[ON/OFF] + [3] + Power ON	: Full test (Manual test mode)
[ON/OFF] + [4] + Power ON	: Internal test is not executed (No Preload, Manual test mode)
[ON/OFF] + [5] + Power ON	: After indicating the version number, the MS2000/MS2000R normally function. (No Preload)
[PAGE +] or [16]	: ITEM UP
[PAGE -]	: ITEM DOWN
[CURSOR >]	: STEP UP
[CURSOR <]	: STEP DOWN

Preload

[ON/OFF] + [REC] + Power ON

Note

The MS2000 takes the calibration of the wheel so please take the full test after repairing it.

On the version 1.00, preload is executed as long as "Finish !" is indicated at the last part of the test. So please do NOT turn off the power until "KORG" is indicated.

(Preload is executed during the Flash ROM test.)

On the version 1.01 and beyond, preload is executed at the Flash ROM test. So without executing the internal test, preload cannot be accomplished.

MS2000 Parts List

PART CODE	PART NAME	NOTE	Q'TY
001216700	PCB ASSY KLM-2167 MS2000	MS2000 M.PART	1
001218100	PCB ASSY KLM-2181/2/3 MS2000	MS2000 M.PART	1
304000070	TR 2SA812-T1B (M5-7) (TS)	KLM-2167 MS2000	1
304020150	TR 2SC1623-T1B (L7) (TS)	KLM-2167 MS2000	1
304020230	TR 2SC3661-TA/TB(3K) (TS)	KLM-2167 MS2000	4
304050220	DIGITAL TR DTC114ESA TP(TR)	KLM-2181/82/83	12
304050270	DIGITAL TR DTB113ZSTP(TR)	KLM-2181/82/83	8
304060250	FET CPH6302-TL(TS)	KLM-2167 MS2000	1
312010900	LED GL3ED8	KLM-2181/82/83	6
312052500	LCD BACKLIGHT 1621-2G	KLM-2181/82/83	1
313005400	LCD NC0G005H02	KLM-2181/82/83	1
314001300	DIODE 1SS-133 T-77 (TA)	KLM-2181/82/83	51
314001400	DIODE RLS-73 TE-11 (TS)	KLM-2167 MS2000	7
314010310	LED HLMF-K200#2UM (TR)	KLM-2181/82/83	7
314030700	SCHOTTKY DIODE RB051L-40TE25	KLM-2167 MS2000	2
314030800	LED SLR-325VCT31(TR)	KLM-2181/82/83	52
314030900	ZENER DIODE RD2.0M-T1B(TS)	KLM-2167 MS2000	2
314031000	LED SLR-325VRT31(TR)	KLM-2181/82/83	16
315000500	DOUBLE DIODE MC-2840-T12-1(TS)	KLM-2167 MS2000	6
320004108	IC HD74HC138P	KLM-2181/82/83	2
320004327	IC HD74HC4051P	KLM-2181/82/83	4
320004649	IC HD6412350(D12350F20) (S)	KLM-2167 MS2000	1
320012254	IC MBM29LV800BA-90PF X-8110(S)	KLM-2167 MS2000	1
320020206	IC XCB56362PV100B(S)	KLM-2167 MS2000	1
324007005	IC BA05FP-E2 (TS)	KLM-2167 MS2000	1
324007006	IC BA07FP-E2 (TS)	KLM-2167 MS2000	1
324009019	IC NJM2115M-TE2 (TS)	KLM-2167 MS2000	3
324011002	IC M5223FP-600C (TS)	KLM-2167 MS2000	2
324011012	IC M51953BFP-600C (TS)	KLM-2167 MS2000	1
324011017	IC M5218AFP-600C (TS)	KLM-2167 MS2000	1
324018006	IC AK4522-VF-E2(TS)	KLM-2167 MS2000	1
324021019	IC SN74AHCT32PWR(TS)	KLM-2167 MS2000	1
324021020	IC SN74AHCT08PWR(TS)	KLM-2167 MS2000	1
324021021	IC SN74HC05APWR(TS)	KLM-2167 MS2000	1
324021022	IC SN74HC4040APWR(TS)	KLM-2167 MS2000	1
324021023	IC SN74HCU04APWR(TS)	KLM-2167 MS2000	1
324021108	IC SN74LV138APWR (TS)	KLM-2167 MS2000	2
324021110	IC SN74LV574APWR (TS)	KLM-2167 MS2000	1
324023008	IC S-8520F33MC-BNS-T2(TS)	KLM-2167 MS2000	1
324037005	IC HY51V18164CTC-60-TE1(TS)	KLM-2167 MS2000	1
324038005	IC TDA1308T/N1 (TS)	KLM-2167 MS2000	2
324040006	IC V53C16256LK-45TP 3.3V(TS)	KLM-2167 MS2000	1
334000600	PHOTO COUPLER PC-410K (TS)	KLM-2167 MS2000	1
335011600	X'TAL OSC CA-301 12.288MHZ	KLM-2167 MS2000	1
335400138	CERAMIC OSC CSTCC10.0MG-TE(TS)	KLM-2167 MS2000	1
362009019	VR RK09K113012Y	KLM-2181/82/83	9
362009025	VR RK09K1130CBU10KB(G3823457M)	KLM-2181/82/83	23
362009027	VR RK0971221Z05 W/SW	KLM-2181/82/83	1

MS2000 Parts List

PART CODE	PART NAME	NOTE	Q'TY
362009028	VR RK1631110G1T 10KB	MS2000 M.PART	2
362009029	VR RK09K1130D1P 10KA	KLM-2181/82/83	2
373009000	SSW SSSS928400	KLM-2167 MS2000	1
374000600	TSW EVQ11A09K (TR)	KLM-2181/82/83	50
402004600	COIL 2943-666673	KLM-2181/82/83	2
402006200	COIL C10-FR/33331 22UH(TR)	KLM-2167 MS2000	1
402400400	COIL C8-E/33331 10UH	KLM-2167 MS2000	1
404001070	CHIP COIL BLM11B102SPT:TS	KLM-2167 MS2000	38
405008000	AC ADAPTOR A30960J	MS2000JP M.PART	1
405008100	AC ADAPTOR A30950	MS2000CN M.PART	1
405008100	AC ADAPTOR A30950	MS2000EX M.PART	1
405008100	AC ADAPTOR A30950	MS2000US M.PART	1
405008300	AC ADAPTOR A9600E	MS2000FR M.PART	1
405008300	AC ADAPTOR A9600E	MS2000GE M.PART	1
405008300	AC ADAPTOR A9600E	MS2000WG M.PART	1
405010500	AC ADAPTOR A9600B	MS2000UK M.PART	1
420006500	KEYBOARD 44TP/7BA+PCB	MS2000 M.PART	1
450003100	PHONE JACK LGR4609-7000	KLM-2167 MS2000	6
454012700	DC POWER JACK DJ32-2	KLM-2167 MS2000	1
454012705	PHONE JACK YKB21-5257	KLM-2181/82/83	1
471102030	CONNECTOR TOP SJ20-03WX	KLM-2167 MS2000	1
471102030	CONNECTOR TOP SJ20-03WX	KLM-2181/82/83	1
471102060	CONNECTOR TOP SJ20-06WX	KLM-2167 MS2000	1
471102100	CONNECTOR TOP SJ20-10WX	KLM-2167 MS2000	1
471102100	CONNECTOR TOP SJ20-10WX	KLM-2181/82/83	1
471102120	CONNECTOR TOP SJ20-12WX	KLM-2167 MS2000	1
471102120	CONNECTOR TOP SJ20-12WX	KLM-2181/82/83	1
471102140	CONNECTOR TOP SJ20-14WX	KLM-2167 MS2000	1
471102140	CONNECTOR TOP SJ20-14WX	KLM-2181/82/83	1
474019600	CONNECTOR 2-215079-0 20P (AMP)	KLM-2167 MS2000	1
474029800	CONNECTOR 52045-4045	KLM-2167 MS2000	1
474029900	CONNECTOR 52044-4045	KLM-2181/82/83	1
475002934	HARNESS HNS-2934	MS2000 M.PART	1
475002935	HARNESS HNS-2935	MS2000 M.PART	1
475002937	HARNESS HNS-2937	MS2000 M.PART	1
475002939	HARNESS HNS-2939	MS2000 M.PART	1
475002942	HARNESS HNS-2942	MS2000 M.PART	1
475102941	HARNESS HNS-2941(F) L=40CM	MS2000 M.PART	1
480010380	DIN JACK YKF51-5041	KLM-2167 MS2000	1
500015700	WHEEL CUSHION KOC-F40486	MS2000 M.PART	6
500022500	CASE LEG FF-004	MS2000 M.PART	4
540024200	PCB SPACER RSPLS-18	MS2000 M.PART	2
545050710	FLAT CABLE TFL-125K-40-250	MS2000 M.PART	1
575017300	LED SPACER LH-5-11	KLM-2181/82/83	2
575018400	LED SPACER LH-5-4.5 L=4.5MM	KLM-2181/82/83	4
620032000	4-LINKAGE KNOB A-2-BK	MS2000 M.PART	1
620032100	4-LINKAGE KNOB A-1-BK	MS2000 M.PART	4
620032300	4-LINKAGE KNOB B-2-BK	MS2000 M.PART	1

MS2000 Parts List

PART CODE	PART NAME	NOTE	Q'TY
620032400	4-LINKAGE KNOB B-1-BK	MS2000 M.PART	9
620035100	4-LINKAGE KNOB B-1-LG	MS2000 M.PART	3
620035200	4-LINKAGE KNOB A-1-LG	MS2000 M.PART	1
620035300	4-LINKAGE KNOB A-2-LG	MS2000 M.PART	1
620036500	X-8410 VR KNOB KOC-E40487	MS2000 M.PART	35
620036900	4-LINKAGE KNOB B-4-LG	MS2000 M.PART	1
620037000	4-LINKAGE KNOB B-2-LG	MS2000 M.PART	3
620037100	4-LINKAGE KNOB B-1-RE	MS2000 M.PART	1
620037300	X-8110 LED REFRACTOR H40147-4	MS2000 M.PART	9
620037400	X-8110 LED REFRACTOR H40147-3	MS2000 M.PART	2
620037500	X-8110 LED REFRACTOR H40147-2	MS2000 M.PART	2
620037600	X-8110 LED REFRACTOR H40147-1	MS2000 M.PART	6
620037900	X-8110 KNOB L H40148-4	MS2000 M.PART	4
630025700	X-572 LCD WINDOW KOC-E40449	MS2000 M.PART	1
641011400	X-912 WHEEL ANGLE KOC-C40815	MS2000 M.PART	2
641041344	X-470 JACK PLATE 2 KOC-C41068	KLM-2167 MS2000	1
641041479	X-013 JACK PLATE 5 KOC-C41132	KLM-2167 MS2000	1
641041546	X-8110 PANEL KOCC-10212	MS2000 M.PART	1
641041576	X-8110/8270 LCD ANGLE C41174	KLM-2181/82/83	1
641041577	X-8110 WHEEL PANEL SUPPORT	MS2000 M.PART	1
641041578	X-8110/8270 POWER SW ANGLE	MS2000 M.PART	1
641041580	X-8110 BOTTOM COVER KOC-C10213	MS2000 M.PART	1
641041583	X-8110 SUPPORT ANGLE C41181	MS2000 M.PART	1
644009100	X-8110 WHEEL SPRING KOC-C41177	MS2000 M.PART	1
645053015	X-8110 SIDE PLATE L D30193-1	MS2000 PART	1
645053016	X-8110 SIDE PLATE R D30193-2	MS2000 M.PART	1
646043000	X-150 CORD HOOK KOC-E40331	MS2000 M.PART	1
646073600	X-8110 CONTROL WHEEL E30249-1	MS2000 M.PART	2
646073700	X-8110 WHEEL PANEL E20129-2	MS2000 M.PART	1

MS2000R Parts List

PART CODE	PART NAME	NOTE	Q'TY
001216701	PCB ASSY KLM-2167 MS2000R	MS2000R M.PART	1
001218100	PCB ASSY KLM-2181/2/3 MS2000/R	MS2000R M.PART	1
304000070	TR 2SA812-T1B (M5-7) (TS)	KLM-2167 MS2000	1
304020150	TR 2SC1623-T1B (L7) (TS)	KLM-2167 MS2000	1
304020230	TR 2SC3661-TA/TB(3K) (TS)	KLM-2167 MS2000	4
304050220	DIGITAL TR DTC114ESA TP(TR)	KLM-2181/82/83	12
304050270	DIGITAL TR DTB113ZSTP(TR)	KLM-2181/82/83	8
304060250	FET CPH6302-TL(TS)	KLM-2167 MS2000	1
312010900	LED GL3ED8	KLM-2181/82/83	6
312052500	LCD BACKLIGHT 1621-2G	KLM-2181/82/83	1
313005400	LCD NC0G005H02	KLM-2181/82/83	1
314001300	DIODE 1SS-133 T-77 (TA)	KLM-2181/82/83	51
314001400	DIODE RLS-73 TE-11 (TS)	KLM-2167 MS2000	7
314010310	LED HLMF-K200#2UM (TR)	KLM-2181/82/83	7
314030700	SCHOTTKY DIODE RB051L-40TE25	KLM-2167 MS2000	2
314030800	LED SLR-325VCT31(TR)	KLM-2181/82/83	52
314030900	ZENER DIODE RD2.0M-T1B(TS)	KLM-2167 MS2000	2
314031000	LED SLR-325VRT31(TR)	KLM-2181/82/83	16
315000500	DOUBLE DIODE MC-2840-T12-1(TS)	KLM-2167 MS2000	6
320004108	IC HD74HC138P	KLM-2181/82/83	2
320004327	IC HD74HC4051P	KLM-2181/82/83	4
320004649	IC HD6412350(D12350F20) (S)	KLM-2167 MS2000	1
320012254	IC MBM29LV800BA-90PF X-8110(S)	KLM-2167 MS2000	1
320020206	IC XCB56362PV100B(S)	KLM-2167 MS2000	1
324007005	IC BA05FP-E2 (TS)	KLM-2167 MS2000	1
324007006	IC BA07FP-E2 (TS)	KLM-2167 MS2000	1
324009019	IC NJM2115M-TE2 (TS)	KLM-2167 MS2000	3
324011002	IC M5223FP-600C (TS)	KLM-2167 MS2000	2
324011012	IC M51953BFP-600C (TS)	KLM-2167 MS2000	1
324011017	IC M5218AFP-600C (TS)	KLM-2167 MS2000	1
324018006	IC AK4522-VF-E2(TS)	KLM-2167 MS2000	1
324021019	IC SN74AHCT32PWR(TS)	KLM-2167 MS2000	1
324021020	IC SN74AHCT08PWR(TS)	KLM-2167 MS2000	1
324021021	IC SN74HC05APWR(TS)	KLM-2167 MS2000	1
324021022	IC SN74HC4040APWR(TS)	KLM-2167 MS2000	1
324021023	IC SN74HCU04APWR(TS)	KLM-2167 MS2000	1
324021110	IC SN74LV574APWR (TS)	KLM-2167 MS2000	1
324023008	IC S-8520F33MC-BNS-T2(TS)	KLM-2167 MS2000	1
324037005	IC HY51V18164CTC-60-TE1(TS)	KLM-2167 MS2000	1
324038005	IC TDA1308T/N1 (TS)	KLM-2167 MS2000	2
324040006	IC V53C16256LK-45TP 3.3V(TS)	KLM-2167 MS2000	1
334000600	PHOTO COUPLER PC-410K (TS)	KLM-2167 MS2000	1
335011600	X'TAL OSC CA-301 12.288MHZ	KLM-2167 MS2000	1
335400138	CERAMIC OSC CSTCC10.0MG-TE(TS)	KLM-2167 MS2000	1
362009019	VR RK09K113012Y	KLM-2181/82/83	9
362009025	VR RK09K1130CBU10KB(G3823457M)	KLM-2181/82/83	23
362009027	VR RK0971221Z05 W/SW	KLM-2181/82/83	1
362009029	VR RK09K1130D1P 10KA	KLM-2181/82/83	2

MS2000R Parts List

PART CODE	PART NAME	NOTE	Q'TY
373009000	SSW SSSS928400	KLM-2167 MS2000	1
374000600	TSW EVQ11A09K (TR)	KLM-2181/82/83	50
402004600	COIL 2943-666673	KLM-2181/82/83	2
402006200	COIL C10-FR/33331 22UH(TR)	KLM-2167 MS2000	1
402400400	COIL C8-E/33331 10UH	KLM-2167 MS2000	1
404001070	CHIP COIL BLM11B102SPT:TS	KLM-2167 MS2000	14
405008000	AC ADAPTOR A30960J	MS2000R JP M.PA	1
405008100	AC ADAPTOR A30950	MS2000R EX M.PA	1
405008100	AC ADAPTOR A30950	MS2000R CN M.PA	1
405008100	AC ADAPTOR A30950	MS2000R US M.PA	1
405008300	AC ADAPTOR A9600E	MS2000R FR M.PA	1
405008300	AC ADAPTOR A9600E	MS2000R GE M.PA	1
405008300	AC ADAPTOR A9600E	MS2000R WG M.PA	1
405010500	AC ADAPTOR A9600B	MS2000R UK M.PA	1
450003100	PHONE JACK LGR4609-7000	KLM-2167 MS2000	6
454012700	DC POWER JACK DJ32-2	KLM-2167 MS2000	1
454012705	PHONE JACK YKB21-5257	KLM-2181/82/83	1
471102030	CONNECTOR TOP SJ20-03WX	KLM-2167 MS2000	1
471102030	CONNECTOR TOP SJ20-03WX	KLM-2181/82/83	1
471102100	CONNECTOR TOP SJ20-10WX	KLM-2167 MS2000	1
471102100	CONNECTOR TOP SJ20-10WX	KLM-2181/82/83	1
471102120	CONNECTOR TOP SJ20-12WX	KLM-2181/82/83	1
471102120	CONNECTOR TOP SJ20-12WX	KLM-2167 MS2000	1
471102140	CONNECTOR TOP SJ20-14WX	KLM-2167 MS2000	1
471102140	CONNECTOR TOP SJ20-14WX	KLM-2181/82/83	1
474029800	CONNECTOR 52045-4045	KLM-2167 MS2000	1
474029900	CONNECTOR 52044-4045	KLM-2181/82/83	1
475002934	HARNESS HNS-2934	MS2000R M.PART	1
475002936	HARNESS HNS-2936	MS2000R M.PART	1
475002938	HARNESS HNS-2938	MS2000R M.PART	1
475002939	HARNESS HNS-2939	MS2000R M.PART	1
480010380	DIN JACK YKF51-5041	KLM-2167 MS2000	1
500018300	CASE LEG 3X22X3 KOC-F48035	MS2000R M.PART	4
500024000	X-410 SPONGE SPACER KOC-F40666	MS2000R M.PART	2
540023000	BUSHING/WASHER/SCREW SET	MS2000R M.PART	1
540024200	PCB SPACER RSPLS-18	MS2000R M.PART	2
545050710	FLAT CABLE TFL-125K-40-250	MS2000R M.PART	1
575017300	LED SPACER LH-5-11	KLM-2181/82/83	2
575018400	LED SPACER LH-5-4.5 L=4.5MM	KLM-2181/82/83	4
620032000	4-LINKAGE KNOB A-2-BK	MS2000R M.PART	1
620032100	4-LINKAGE KNOB A-1-BK	MS2000R M.PART	4
620032300	4-LINKAGE KNOB B-2-BK	MS2000R M.PART	1
620032400	4-LINKAGE KNOB B-1-BK	MS2000R M.PART	9
620035100	4-LINKAGE KNOB B-1-LG	MS2000R M.PART	3
620035200	4-LINKAGE KNOB A-1-LG	MS2000R M.PART	2
620035300	4-LINKAGE KNOB A-2-LG	MS2000R M.PART	1
620036500	X-8410 VR KNOB KOC-E40487	MS2000R M.PART	35

MS2000R Parts List

PART CODE	PART NAME	NOTE	Q'TY
620036900	4-LINKAGE KNOB B-4-LG	MS2000R M.PART	1
620037000	4-LINKAGE KNOB B-2-LG	MS2000R M.PART	2
620037100	4-LINKAGE KNOB B-1-RE	MS2000R M.PART	1
620037300	X-8110 LED REFRACTOR H40147-4	MS2000R M.PART	9
620037400	X-8110 LED REFRACTOR H40147-3	MS2000R M.PART	2
620037500	X-8110 LED REFRACTOR H40147-2	MS2000R M.PART	2
620037600	X-8110 LED REFRACTOR H40147-1	MS2000R M.PART	6
620037900	X-8110 KNOB L H40148-4	MS2000R M.PART	4
630025700	X-572 LCD WINDOW KOC-E40449	MS2000R M.PART	1
641041344	X-470 JACK PLATE 2 KOC-C41068	KLM-2167 MS2000	1
641041479	X-013 JACK PLATE 5 KOC-C41132	KLM-2167 MS2000	1
641041576	X-8110/8270 LCD ANGLE C41174	KLM-2181/82/83	1
641041578	X-8110/8270 POWER SW ANGLE	MS2000R M.PART	1
641041579	X-8270 PANEL KOC-C20359	MS2000R M.PART	1
641041581	X-8270 BOTTOM COVER KOC-C20360	MS2000R M.PART	1
646043000	X-150 CORD HOOK KOC-E40331	MS2000R M.PART	1